Energy Action: Communities at Work Conference Proceedings

Ontario
Ministry of Energy
Honourable Philip Andrewes
Minister

Energy Ontario

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ENERGY ACTION: Communities at Work

Conference Proceedings

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WELCOMING REMARKS
Glenn R. Thompson, Deputy Minister
Ontario Ministry of Energy

Over the past decade, we have come through a period of rising energy prices and quite uncertain supply. Now we're in a period of what seems to be plentiful supply. But maybe this is only for the short run. One has to look at energy matters not just in terms of the next year or two but over the longer haul, taking into consideration the length of time required to get major energy projects such as the tar sands on stream. We should learn from the past ten years experience and be prepared to deal with what is in reality a fragile energy economy.

Planning for uncertainty will become a more important activity for municipalities. And energy management must be a major component of this community energy planning. Community energy management and planning is one of the cornerstones of the ministry's conservation thrust, basically because it's in line with our main philosophy of "example is the best teacher". And you in this room are the driving force, or have the potential to be the driving force, behind this thrust. Your dedication and leadership, your direction and guidance, will influence the community -- the shop owners, the factory workers, the home makers, the school teachers. I see you as leading the way to community involvement in energy conservation. We need to see the public's interest and awareness of energy matters expanded and to use this time of non-crisis to do that.

You know as well as I that seeing is believing. Through your example other community members will come to see that not only does energy conservation work, but it's relatively painless, it makes dollars, and it certainly makes sense. This will foster the beginning of what we like to refer to as the conservation ethic. This ethic will hopefully spread to neighbours, friends, and importantly, children. Perhaps with a good example and with any luck, our next generation will be of the waste-not-want-not school.

I'm very proud of the working relationship that has developed and grown between the Ministry of Energy and the many communities and municipalities across Ontario. I am confident that this will continue. We hope that those of you who haven't already will be encouraged to take advantage of the assistance that the Ministry of Energy and other ministries such as the Ministry of Municipal Affairs and Housing can provide in helping you to set up programs. From the many government energy programs and community energy projects that exist, ministry staff can help you to custom-design a program tailored to your community's needs.

INTRODUCTION
Alan Leslie, Executive Coordinator, Energy Conservation
Ontario Ministry of Energy

For the past several years, the Ministry of Energy has had a strong commitment to helping improve energy efficiency in municipalities and communities. We believe that without your participation and the participation of other groups, who through the provision of services and facilities have a great deal of influence over the day-to-day lives and habits of the people that you and we serve, our job in the ministry of making energy conservation an accepted practice would be more difficult.

There is a continued need to be diligent in our conservation efforts. World oil prices have increased about 1300 percent since 1973. At the same time the consumer price index has increased 162 percent. These are fairly dramatic orders of magnitude differences. We have been protected to some degree because Canadian oil prices have risen more slowly than the world oil price over the last decade largely because of federal government policy. But in spite of that, Canadians everywhere have been affected by the dramatic increase in energy prices. In Ontario the retail prices for all forms of energy -- heating oil, electricity, natural gas, gasoline -- have all increased faster than the rate of inflation during the past decade. Between 1971 and 1982, the cost of heating oil increased six times, natural gas more than quadrupled, and gasoline prices almost gradrupled all in current dollars.

The reason I'm citing these figures is to remind you of the period through which we've come. The effect of these price changes is well known to you as individuals and as officials and politicians and staff in your day-to-day work. It may not be as well known that Ontario purchases a significant amount of its energy from outside the province. It's been estimated that by 1986 the net outflow of funds from the province for fuel may be $14 billion; funds that will go to other provinces and off-shore. What that means is that on an annual basis there will be fourteen billion dollars less circulating in this province which could be used by consumers and businesses to stimulate the economy. Another point which may not be too widely appreciated is that Canada continues to import oil, currently at about 20,000 cubic metres per day. The amount we import has been decreasing. But over the long term, depending on what happens with some of the mega-projects, it's likely that Canada will increase its dependency on imported oil.

The national and provincial energy situation is reflected at the local level. The more money people have to spend on heating their homes and driving their cars, the less they have to spend on other services and products in their communities. There has been a significant change in the proportion of people's incomes that goes just to supporting their energy needs.

These obviously are cold hard facts. Energy efficiency and energy conservation are far from new. I was reminded this morning that today is the 100th anniversary of Rudolph Diesel who is credited with the development of the diesel engine. At that time steam engines operated with a 10 per cent efficiency. The diesel engine represented a significant advance for it increased the efficiency of conservation of energy to 30 per cent.

So far I've been referring primarily to the supply side of the energy equation. This side is managed by and large by relatively few suppliers and it's amenable to large decisions. The world would be a lot simpler if the demand side could be managed in the same way. This isn't the case. The demand for energy is influenced by individuals, small firms, large firms, municipalities, actions of the provincial government, in short by a vast array of individuals and small diverse interests. This is one of the factors that makes managing the demand side of energy, in terms of promoting conservation and greater efficiency in energy use, so complex.

Municipal governments, I'm sure you are aware, affect energy users through the services they provide in addition to being energy users themselves. We have many examples of how some municipalities have saved energy themselves and have had a significant influence on the consumption of energy by their citizens. It's these actions, both internal to municipalities and the impacts on their citizens, that we will be discussing today. We hope that you, in your capacity as municipal officials both elected and staff, will study these examples carefully to see what you can learn and apply when you return.

For the ministry's part, we feel that we've led the way in demonstrating practical energy conservation techniques, in providing information, and in furthering research. The Municipal Oil Conversion and Energy Conservation Program has saved millions of litres of oil and millions of dollars for municipalities and has provided what we think of as an invaluable education for municipalities and for ourselves. The same is true of our industrial program. We've had almost 1,200 industries reduce their energy costs aided through small subsidies from the Ministry of Energy. Our Buildings Technology Research Group is developing high efficiency commercial boilers and various heating, ventilation and water systems for improving the energy efficiency of buildings.

In many of the areas we're involved in, we work very closely with municipalities, other ministries and many other groups. This is another factor which makes energy demand-side management complex but also exciting. In the transportation sector, for example, we work through and with the Ministry of Transportation and Communications and the Municipal Transportation Energy Advisory Committee. Some of the things

that they have done include establishing about 100 van pools with private companies, encouraging fleet operators to convert to propane and natural gas vehicles, and developing education programs for drivers and fleet managers.

We're also proud of our own internal record in government-run buildings. Government buildings today are using twenty-five percent less energy than they were in 1976. That represents a cumulative saving of $27 million in fuel costs for a net investment of $12 million over that period. In addition, the Ontario Government plans to convert some two thousand of its own vehicles to propane by 1987.

I've talked so far about conservation and efficiency projects. The ministry, however, is into many other things. Renewable energy projects are equally important. For example, there are 20 municipal utilities in the province that own and operate small hydro generating facilities. There may be as many as 100 more potential small hydraulic sites in the province. The ministry is working with municipalities to develop these sites where it appears there is a sound basis for doing so. Also demonstrations of energy from municipal waste and biomass have been carried out by the ministry with municipalities and businesses.

Over the past five years, the ministry has built-up an extensive bank of knowledge and information. It's important now that this knowledge and information be used to its fullest potential. One of our objectives today is to have you consider the variety of resources available to you both collectively amongst yourselves and from the Ministry of Energy. We'll continue to conduct research and to fund projects that have potential for direct energy savings. But one of the potential thrusts for the foreseeable future will be to market existing technologies and techniques and to make better use of the material that has been developed over the past several years and at considerable cost. We're eager to make it easy for you and others to take advantage of these resources. To this end, we're prepared to provide advisory services in several areas of energy management and conservation as we have been doing in part over the past several years.

Burlington, Brampton, Stratford and Ottawa representatives will be describing their efforts to develop long-term community energy management plans. Based on experiences with these projects and using the materials that have been prepared as part of them, we're anxious to assist you to custom-design an energy management program tailored to your community's needs and resources. Similarly, Toronto's Energy Conservation Community Outreach project, ECCO for short, and Energy Savers Peterborough have yielded valuable information and lessons from which many municipalities can benefit. We're currently developing an easy to use method for community energy profiling

or getting a picture of where energy is used throughout the community. In transportation, the Transportation Energy Management Program and the Ontario Vanpool Organization offer a service to establish vanpools. Literature, films and slide shows are available on driver education and fuel efficiency in truck fleets. Newsletters and manuals on municipal and inter-city transportation energy savings are available. Practical information on land use planning techniques that conserve energy have been developed jointly with the Ministry of Municipal Affairs and Housing through the Energy Conservation Through Land Use Planning Grants program and through our work on a series of planners' handbooks. Additionally, we've developed a computer program that maps the shadows cast by buildings throughout the day. This could be of use to planners in municipalities and we will be working to adapt the program to suit their particular needs. We would like to expand the use of these materials and hope soon to be able to organize forums for explaining in detail how some of these materials can be used in the variety of circumstances that we know exist in your communities.

Our hope is that as leaders in municipalities you will take the time to determine how you can make best use of these services and information in your municipality. You are all in good positions to know who can benefit, how you can use some of these resources, and what else may be required. The people of Ontario certainly need municipalities to continue to help carry the banner of energy conservation. We hope today that through contact with other municipalities you'll renew your commitment to protecting citizens against the impact of rising energy costs and the spectre of an uncertain world energy situation. We hope the presentations that you'll hear today will fan a flame of interest, and that they'll encourage you to think of how your community could benefit from an energy conservation program and how you could help to initiate such a program.

We believe that there is a large untapped energy saving potential in Ontario. I'm sure you've all heard that conservation is the cheapest way to gaining new energy supplies. There was a major study done in the United States which suggested that every eight dollars invested in conservation equated to one barrel of oil not being required. The international price for a barrel of oil is roughly $30. So conservation provides a good return on the investment.

We're interested in community energy strategies that map out steps to be taken to get from our current state to a more desirable one. But we're equally interested in having people understand that energy is a precious resource. Like our forests and foodlands, it is not something that should be squandered. It should be managed wisely so that there is something left over for our grandchildren and the generations to come. Through energy management we could all continue to enjoy a high standard of living free of waste. Getting involved, we hope you'll agree, is worth it.

BURLINGTON'S COMMUNITY ENERGY MANAGEMENT PLAN
Doug Raven, Energy Coordinator, City of Burlington

Before getting into the details of our progam, I'd like to provide those of you who are not familiar with Burlington with a brief description of our city. A Globe and Mail article that attempted to capture the essence of our community provided this introduction.

"A magical land of microwave ovens and video games, Burlington Ontario, is a sprawling collection of middle-class housing developments pushed up on yet more middle-class housing developments. If seen from the air it would look like one giant front lawn, all dandelion-free and sprayed for crabgrass. It is a perfect North American suburb, so perfect that it even has its own suburbs created no doubt by some sort of bizarre community mitosis.

"This description, although somewhat tongue-in-cheek, does bring out some important points about Burlington in terms of energy conservation. Burlington is primarily a low density, middle class, residential community. As a result of the built form and the fact that people have to travel long distances to get anywhere in the community, energy consumption is high. Concern about Burlington's vulnerability to energy price increases and potential shortfalls led to the decision to apply to the Ministry of Energy for funds under the Community Energy Management Demonstration Program. The City's proposal was approved and energy management planning began in earnest in April 1982.

Our program incorporated two distinct components. The first was an Energy Information Centre. This Centre was set up in an office and retail complex adjacent to City Hall and it provided the public with information on a complete range of topics free of charge. We had materials from all levels of government as well as private agencies. We directed the public to other information sources and did additional research when that was required. We also had a phone-in service for people who couldn't make it into the Centre and a weekly newspaper article dealing with various energy conservation topics. And finally, we conducted evening seminars for those who couldn't get to us in the daytime.

Our information service was very successful. We responded to over 1,300 requests in our first year and people who dropped into the Centre seemed very enthused because they were able to get information at a centre within their own community. We recently closed that separate energy centre and are continuing the information function within the Building Services Department in City Hall.

The second component of our program was the preparation of a community energy management plan. This plan was designed to be a blueprint for our future activities in energy conservation within the municipality. It contains three components: programs for civic operations, programs and proposals for land use planning, and objectives and programs for community outreach. Because of the nature of today's discussions and time constraints, I'm going to limit my comments to the community outreach components of the plan.

To aid in the development of a plan of action, the City enlisted the support of members of the community. We established the Burlington Energy Action Committee which included citizen representatives, school board representatives, city staff, a city alderman, and, from time to time, other community resources such as representatives from Union Gas and Burlington Hydro. The committee began by formulating a set of broad objectives as to what we would like to accomplish in the community and by assembling a list of programs tied to those objectives. Once the general direction for the plan was established, an energy profile of Burlington was undertaken to gather the information required to determine the feasibility of the programs and to establish a list of program priorities.

The energy profile focused on energy consumption by sector in the community. At the same time we attempted to identify local community resources which might provide assistance to the program. We also conducted a community attitude survey to find out what might convince people to take a greater interest in energy conservation and to determine what barriers blocked energy conserving initiatives. Not surprisingly, we found that 87 per cent of the survey respondents said that the cost of energy was the most important or one of the most important factors in convincing them to conserve. Interestingly, while the cost of energy is prompting people to conserve, it is the cost of conservation that prevents them from taking any serious steps. People want to save money by conserving energy as long as it doesn't cost them anything to do that. This attitude was very noticeable among the people who dropped in to get information at the energy centre.

About 40 per cent of the requests we received were about grants offered by the various levels of government. From this attitude survey we learned that to convince people to use energy more efficiently we had to point out to them that there were cost savings and that these cost savings could be achieved often through easy, inexpensive measures. We hope that once we are able to convince people that there are measures that could be taken that don't cost a lot of money, we will be able to entice them into undertaking the more expensive measures and save even more energy.

The results of the survey and the other profiling information was used to refine the objectives and the list of programs that had been developed in the first phase of our planning effort. After several rounds of refinement, the plan was forwarded to Council for its consideration. Council approved the plan last month, about 15 months after the committee began its task.

The plan divides the community outreach programs into six sectors: residential, transporation, commercial, industrial, schools and religious and social service organizations. Most of the plan's programs focus on the transportation and residential sectors because these sectors consume 41 and 29 per cent of Burlington's energy respectively. They represent the largest energy users.

The kinds of programs incorporated into the plan include an inspection service for homeowners who have had home retrofit work done to make sure they are getting value for their money; an educational program for homebuyers through local real estate agents who we'll provide with information that they can pass on to their clients; the promotion of car and vanpooling schemes among city businesses and social service organizations such as hospitals; dissemination of information on energy efficient driving through local driver education programs; the provision of special awards for outstanding school science projects dealing with aspects of energy conservation (these were started last year and were very well received by the schools); and a seminar series for religious and social service agencies on how they can save energy (our discussions with representatives of such agencies revealed a strong interest in seminars that would give them practical conservation advice). All in all, there are 34 programs that will be conducted by the city and other local organizations over the course of the next few years.

If these programs are successful, we hope to achieve roughly a 10 per cent decrease in energy consumption across the community. That may not seem like a big decrease. But that 10 per cent will translate into over $19 million in savings per year, based on 1983 energy costs. The bulk of that $19 million would have left the community as energy expenditures. The monies that will stay in the community as a result of conservation efforts can be used to purchase local goods and services and stimulate the local economy.

We are just now beginning to implement these programs and we realize that achieving the plan's objectives won't be easy. Energy prices have recently stopped the rapid rise evident over the last decade. And the current perception is that there seems to be more than enough oil, gas and electricity to meet our needs. Accordingly, concern about energy conservation has decreased slightly over the past few years. It is not the political issue it was three or four years ago. Because of this, funds for energy conservation programs may be harder to get. But this doesn't mean that energy conservation initiatives should be put aside. All indicators point to the

fact that this present situation is only temporary, that over time energy prices will continue to rise, and that supplies will continue to decline. As municipal representatives, it is our responsibility to use this present respite to organize and make plans for the future so that our municipalities aren't caught out when the situation changes in the future. Now is the time to make information and advice available to the residents so that they too can be prepared for future situations.

The City of Burlington with the Ministry of Energy's help has taken some steps towards the goal of decreasing its energy vulnerability. We have a long way to go yet. Energy management won't be easy but that just means we'll have to work that much harder if we want to achieve our goal.

Adrian Tumber, Chairman, Burlington Energy Action Committee

I was very pleased to participate in the energy activities of the Energy Action Committee. We were very excited to be able to contribute to the planning process that culminated in the adoption of an energy management plan for the city.

Our concern as a committee, though, is that energy conservation is not achieved through conversation, which is an important ingredient of the planning process, but through action or implementation. We have, for example, some concern that our Information Centre has been moved upstairs to City Hall. It is not as visible as it was in the prime retail location it had next door. Another concern that we have is that Doug is no longer involved full time in energy work. He has been reassigned to the Chief Administrator's Office and consequently can put in only about two days a week towards the implementation of the plan which he so capably developed with our modest assistance.

In some ways it's a bit altruistic of the city to allow Doug to continue to work on the energy conservation program because the payback is not to the city itself but to the homeowner. And so the city doesn't see a return on its investment of Doug's effort and time. Consequently what we're concerned about is that city officials and elected representatives have to organize that energy conservation is a municipal priority that must be supported not only for those aspects which relate to energy conservation for city-owned facilities but also where the return is for the homeowner or businessman.

QUESTION PERIOD

Question: How did you conduct the survey?

Doug: To save money we distributed the survey through the school system. We chose the schools on the basis of geographic area and tried to get a good a cross-section of different housing types. The children took the questionnaires home, the parents filled them out and the children took them back to the schools. We sent out about 350 questionnaires and we got back about 230.

Question: How large a staff did you have?

Doug: When we were funded by the Ministry of Energy we had a staff of two, myself and someone assisting me with research and in the operation of the Energy Information Centre. I am the only staff person now and, as Adrian said, am able only to devote two days a week to the program. Like other municipalities, Burlington has been affected by fiscal restraint and this has involved staff cutbacks by attrition.

The Energy Information Centre has been moved to City Hall and it isn't as visible as it was. City Hall is being expanded, however. And the new plans for City Hall recommend that space be reserved for a more prominent display of the Energy Information Centre. So perhaps in the future the center will be more visible to the public.

Question: How much involvement did you have in land use planning and transportation planning in the preparation of the energy management plan?

Doug: Very little so far. We had some problems at the political level in getting staff time to devote to energy conservation through land use planning. There are a number of issues that came up locally that took priority over energy matters. We now have a commitment for substantial staff time in the 1984 budget year to map out a strategy for energy conservation through land use planning for Burlington.

Question: How many people in the Building Department were involved in the city's energy management program?

Doug: Several people in the Building Department have been involved in the energy conservation program since 1979 and are quite well versed in energy matters. Those people are responsible for responding to requests for information. If they don't know the answer, they come to me. And if I don't know the answer, I go to the ministry.

OTTAWA'S ENERGY ACTION PLAN PROCESS
Evelyn Gigantes, Project Manager

I will give you a brief overview of the structure of the Ottawa Energy Action Plan Process. The Energy Advisory Committee is the place to start in describing our planning process. It was appointed by City Council as one of many activities undertaken by the city over the last decade in the energy area. It was appointed in July 1979 to give advice to council and staff on matters that related to energy conservation in the city. It's a 12 member committee with 10 citizen appointees and two council members. Its role was advisory, but by 1981 the committee decided that it wasn't taking an active enough part in determining what was happening with energy conservation. It took the initiative to design a project which is called the Energy Action Plan Process and it sought City Council approval and funding which it received in October of 1981. It subsequently received additional funds from the Ministry of Energy under the Community Energy Management Demonstration Program and began operations in April, 1982.

The first point of note about the initial phase of the process is the organizational arrangement for the planning process. The Energy Advisory Committee assumed management responsibility for the project and set up two subcommittees. Because the first year focused on the residential sector, they set up a residential subcommittee composed of members of the community to identify energy action options which could then be taken to the community as a whole. The Energy Advisory Committee also set up a participation subcommittee to devise a framework for public consultation.

The project is designed to operate over three years. Originally each phase was to take one year and focus on one sector. We're still not out of the first phase dealing with the residential sector. I think this sector will be the most difficult in terms of planning options, outreach and community participation. The second phase will be concerned with the commercial, industrial and institutional sector. The third phase will focus on the transportation sector.

So far, the bulk of our efforts have been directed towards conservation in the residential sector. The Energy Advisory Committee set goals and then structured the subcommittees. The residential subcommittee prepared a list of options for action which was presented to the community in a booklet titled "Energy Action Plan Process: Towards an Energy Action Plan for the Residential Sector". The options consisted of 29 recommended options and 43 other possible options. There was a period of intensive public participation running from January 1983 almost through to May. We had expected to bring a report

on the residential phase of council by June but it has turned out more difficult than we had anticipated to incorporate all of the public input that we received. We're in the final stages of preparing that report and we expect that it will go before council in a few weeks.

When we spoke to people about energy conservation, we mentioned many of the concerns that have been referred to today. Ottawa's residential energy bill, as we calculate it, is about $122.3 million. We put the pitch to the Ottawa community that a good energy plan could mean a vigorous insertion of economic stimulus to the Ottawa economy.

Our options for the residential sector fell into six categories: existing housing, new housing, land use planning, renewable energy, education programs, and programs to stimulate the local economy. Of all our recommended measures, the compliance provision attracted the most attention. This was a proposal put forward by the residential subcommittee and approved by the Energy Advisory Committee. Essentially, the compliance measure stated that within a period of five years any residential property for sale within the City of Ottawa must have in place all those energy conservation measures that would pay for themselves in seven years. This provision created an enormous backflow of what we called "response". We had some wild meetings.

One other item that I'll draw attention to, which provided some difficulty for the Energy Advisory Committee and the residential subcommittee when it came before them, was the development of measures that would assist landlords and tenants to conserve energy. Any of you who have tried to do something in this area know how difficult it can be.

Two of the key recommendations in the existing housing category were the setting up of the energy centre and setting up of what we now call an energy loan fund. The energy centre is to be a non-stop centre providing a vast array of services. The idea was to make it easier for householders to get information and locate resources and know-how to get things done. Those two items will be put before council in the final report.

All of the proposals in the six categories have been narrowed down as a result of the public participation program. In the renewable energy category, we will be proposing the establishment of a municipal renewable energy utility. In terms of the education category, the proposals were narrowed down to programs which would come out of the energy centre. To strenghten the local economy, the Energy Advisory Committee has coordinated its energy conservation proposals with recommendations being developed by a new branch in the city called the Economic Development Branch. I think there is great potential for city activity in this area.

Our public participation approach involved public meetings and extensive advertisement of our telephone number. We got a lot of free publicity. Over 200 people called us in a four-month period. We received 88 letters and questionnaires. We held final public hearings where members of the community, either in groups or as individuals, could come and make formal presentations for the record. Through those mechanisms we had in total 770 direct contacts with the public. In addition to that we hired the Carleton School of Journalism to do a poll for us of 505 representative respondents in the City of Ottawa. We found an interesting difference in the response obtained through the survey and the response we received through our mechanisms of community feedback. We found, for example, that tenants who had not come out to the meetings were in favour of the city taking action in the energy field.

About 2800 hours of volunteer time went into the work in phase one up to July 1983. This volunteer effort was very high quality. Right now we're at the stage of preparing the residential report for council. It will probably take council a few months to deal with it in a complete way. We are beginning work on phase two, the transportation sector, and we expect that it will take a different format than phase one. And we are starting to gather information for phase three, the commercial, industrial and institutional sector

Alderman Rolf Hasenack, City of Ottawa, Member of the Energy Advisory Committee

The process which Evelyn outlined is only one part of the city's energy conservation efforts. We also have an energy planner who looks at overall land use planning and to some extent transportation planning. We are also trying to get very concrete information out to the public. For example, we have a city page in the Saturday editions of both the English and French-language newspapers and we use a portion of that to disseminate information on energy conservation methods. This has been very popular. We call this our "conservation pipeline". We hope that the constant dissemination of small bits of information will change attitudes and behaviours.

As Evelyn mentioned, a high proportion of Ottawa residents -- about 80 per cent of those surveyed -- were strongly in favour of the city's involvement in the energy conservation area. That contrasts sharply with the political climate at present. When the Energy Action Advisory Committee was set up there was a lot more impetus on the political level to do something about energy problems. Since that time there have been two elections and, as elsewhere, energy conservation does not enjoy as high a priority as it did in 1979. Economic diversification commands greater political interest. That has to be taken into account in considering what is going to happen with the recommendations of the Energy Action Plan when they go before council. Unfortunately most of the attention has focused on the question of compliance for residential properties. There has been a lot of opposition for owner occupants in many of the neighbourhoods. On the other hand, when you delve into the question more deeply you will find that there is strong support for this measure. But the issue did get a lot of unfavourable press, especially in the english language papers, and this may have already influenced some council members. The Energy Advisory Committee has decided not to recommend compliance for owner-occupied homes. The dilemma that I face as an alderman is trying to decide what should be done about rental properties if the compliance measure is not adopted. Renters are particularly vulnerable and I believe something should be done to ensure that rental properties are energy conserving.

As politicians and staff members we should keep in mind that the survey showed that people did want the municipality ot take action. Yet we so often heat politicians arguing that municipalities should not get involved and that action should be left to the provincial level. This is clearly not the message that came through the survey. I hope our municipality will go ahead with some concrete plans and take action.

Our concern now is where will we go next. It's far easier to identify options that will help the individual homeowner than to change attitudes towards land use planning, densities and transportation planning especially in North America where we are used to our single family house, our backyards, our cars and communting. Those attitudes will be far more difficult but far more important to change.

QUESTION PERIOD

Question: The reaction to the compliance measure could be viewed as negative but didn't it also generate a lot of interest in what the Energy Advisory Committee was trying to do?

Evelyn: The committee certainly didn't put it forward as something to capture attention. The committee put it forward as a very serious proposal recognizing that there would be opposition from owner-occupants in many cases. In many other cases there is not opposition because there is also a proposal for financing of renovations so that there would be no barrier to anyone in any income level to go ahead with the required renovations. However, I think that the strongest reason for putting forward the compliance provisions was that 62 per cent of all households in Ottawa are rental households. I haven't looked at statistics in other cities but I think that is pretty high. And it certainly became apparent in the public opinion survey that we undertook that a good many tenants and homeowners were prepared to support the mandatory compliance measure.

Alderman Hasenack: When the booklet came out it seemed that there wasn't very much interest. We did use the question of compliance to get more attention drawn to our proposals. We got a lot of reaction and it is mixed. Our concern is that the politicians see that mixture and not just one side of it.

Question: What effect will the compliance measure have on property assessment?

Evelyn: There is a proposal for a reimbursement by the city of any increase in taxes as a result of the energy conservation renovations. There wasn't an enormous amount of popular support for that. There wasn't support among homeowners in the public opinion survey for that proposal although the tenants supported it probably because tenants don't realize that they pay property taxes. So that recommendation was dropped and it won't be in our final report. It doesn't appear that property tax is going to be an issue.

Question: It appears that the emphasis in the residential sector was on information services. What other approaches have been taken?

Evelyn: The proposed Energy Centre is actually a very ambitious project. It would provide a free energy audit for any homeowner including landlords. Its projected cost is about $1 million a year and it will have about 12 auditors on staff capable of providing 5000 audits per year. It will also offer a full bank of information on how to contract out for required renovation services and advice on filling out forms for financial assistance. It's intended to provide a full complement of services. It's not what one would think of in terms of an information desk.

Alderman Hasenack: That does not yet include the transportation, commercial and industrial sectors which we are just beginning to work on.

Question: Regarding the compliance measure, were the city's property standards bylaws and the federal government grant programs such as C.H.I.P. considered as means of implementation?

Alderman Hasenack: Yes. As far as the financial aspects are concerned, now that the municipalities can have the property standards loans put on the tax roll, it is easier to recover the money. It can be done now without too much of a problem. Some of the legal advisors don't like it but that's the direction we're taking it at the moment.

STRATFORD'S COMMUNITY ENERGY MANAGEMENT PLAN
Michael Jorna, Councillor, City of Sarnia

As we drove from Stratford to Toronto this morning we were remarking on the advantages that larger centres have over us when it comes to energy conservation. There are so many things that can be done in large cities. Stratford is the smallest of the four energy management demonstration communities. Our population is only 27,000. And so we have difficulty justifying packing people into vans to get to work. No one lives more than a few minutes drive from their place of employment. Similarly, it's hard to convince people to make better use of public transit. Our bus service is heavily subsidized.

We have discovered that there are three ways to make people conserve energy. You can hit them in the pocketbook, or you can legislate actions, or you can educate them. I have become convinced that education is by far the best way to go. Some of our community energy management involvement is not new.

In 1972 we established an energy and environment study committee made up of citizens. This was before the OPEC crisis. Every year since then we have had an Energy Week in which we tried to educate people. We have had a great deal of success and as a result I believe that the people of Stratford are very conscious of the need for energy planning. To give you an example. For a number of years we have run a newspaper and glass recycling program. Our glass recycling program ran into trouble because it was a volunteer effort and some of the volunteers decided they had had enough. So we centralized it and took it under the municipal wing. But people had become so accustomed to taking their glass to the recycling depots that they continued to bring their glass to their local recycling bins. We had to put up signs at these local depots to remind them to take the glass instead to the municipal public works yard. This is the type of citizen compliance we have. As part of this compliance however, we have inherited a huge problem. I think that we have more urea formaldehyde insulated homes per capita than any other city.

We were fortunate to have been chosen as one of the demonstration communities by the Ministry of Energy. And as a small community I think we have a responsibility to try and show the way to other small communities, to show what can be done to promote energy conservation. We had to staff resources allocated to energy conservation activities until the Ministry of Energy program. Our conservation efforts were all done on a volunteer basis up to that point. I'm sure other small communities can identify with that situation.

Our politicians are behind the citizens when it comes to energy conservation and I think this is one of the reasons Stratford was chosen as a demonstration community. Our mayor has been actively involved in promoting energy conservation for years. The two of us have had some impact on council. Without political support, I think that those interested in energy conservation would face an uphill battle. There are things that council can do such as official plan changes and the endorsement of applications to the Ministry of Energy. But for these things to be supported there has to be someone on council who is willing to push energy conservation initiatives.

Brian Reid, Program Supervisor, City of Stratford

One of the advantages we have in aldermen who care about energy programs. This makes our job a whole lot easier. In addition, as Councillor Jorna pointed out, the Stratford community has a long history of involvement in energy conservation programs. Nontheless, we were fairly inexperienced in terms of developing an energy management plan. The first thing we did was to structure a committee. It included the mayor and two aldermen so that we would have a strong political commitment; members of the Energy and Environment Sub-committee; the city engineer; representatives from Union Gas, the Public Utility Commission, the Board of Education, the Chamber of Commerce, and service clubs and citizens. The response from the community to our advertisement for committee members was enthusiastic. We got an advertising executive, an architect, a contractor, a public health inspector, and a recycler. For staff, we started out with two students to do our energy profiling. Because Stratford is a small community, we were able to tap into resources and obtain statistics which other larger communities were having trouble getting.

Once the committee was set up, we began a very involved planning process. We got out our pens and developed some fairly elaborate flow charts delineating a process of issue identification, data collection, data analysis, program formulation, program approval, and plan implementation. The charts looked interesting but the committee couldn't help feeling that it was a lot of dry mulch. They wanted to discuss energy conservation activities.

The committee broke itself down into five groups. The building sub-committee was interested in tackling the residential, industrial and commercial sectors. They knew that there was a lot of activity going on already in these sectors but they had some difficulty in getting a fix on it. One of the areas of concern they focused on was energy use in apartments. They attempted to tap into tenant/landlord programs. At the same time they worked with the building inspectors to get them involved in energy auditing. City buildings were caulked and weatherstripped and checked over carefully for other energy conservation opportunities.

Another sub-committee was the waste management group. Stratford is 27 miles from Highway 401 and there is a strong interest in recycling. But when the market fails we can't afford to haul the glass and recycled materials. The pellet project was a response to this problem. The objective was to use agricultural pelletizers to compact the waste into a burnable fuel. The project has attracted considerable interest but it is too large a project for the resources available to us under the ministry's Community Energy Management Demonstration Program. We're looking for waste management companies or industries that are interested in using this approach to recycling waste.

We also looked at incorporating a visitor impact component into our energy management strategy. Stratford is the second largest tourist information centre in Ontario and we get half a million people travelling the highway into the city. We examined the potential of shifting some of the automobile use to transit. But you only have to deal with VIA Rail for a short time to realize how difficult that is. It's something that we're going to have to get the assistance of the province on. What we did manage to do was to conduct a survey of the tourists. The study revealed that there were a high number of visitors interested in using a shuttle services that would take them from hotels to the theatre and downtown. We're now trying to coordinate all the tourist groups to get them to work together as a unit. Getting people to work together is essential for energy conservation programs. It's going to take time but the interest is there.

The transportation sector has been hard to grapple with. You can drive across the city in six minutes and so vanpooling, public transit and other common transportation measures aren't that applicable. Our Public Utilities Commission, however, is investigating ways of making the bus system more energy efficient. Momentum is beginning to build and hopefully we'll see some positive results in the near future. The one item that sparked some interest was the two-person car. There are recreational facilities that use these mini-vehicles. The difficulty is that the regulations governing vehicles make it very tough to use mini-cars on the road. It looks like we won't be able to go ahead with that option. Despite our problems, there is a lot of interest in the community when it comes to conserving transportation fuel. We held a "Gas Miser Day" and even though the temperature was 95°F, 100 people showed up. They were backed up two blocks and had to wait 45 minutes to get their car checked over. Now that's enthusiasm!

The last set of initiatives I'd like to mention is communications. Several committee members wanted to devote some time to investigating ways of promoting the energy management program. We've maintained a fairly low profile so far and it was felt that for the program to be successful it would be necessary to get strong community backing. Out of that concern, an energy centre was set up. We have plans for a number of activities in the fall that we hope will bring further support from the community.

We are enthusiastic about our energy management program. We know that the community support is there. The assistance of the Ministry of Energy has been tremendous. And we have many people offering suggestions about how to make our energy program more effective. We've make some progress and we're looking forward to further challenges.

Judy Eisin, Program Coordinator, City of Stratford

As the only full-time staff person involved in the city's energy management program, I've gained some insights which I'd like to share with you. We have made some mistakes and we've has some successes. Hopefully, there's something to be learned from both.

The first think that I want to discuss is the steering committee. Our steering committee is made up of citizens. Some may question whether such citizen involvement is necessary or whether the staff should assume full responsibility for directing the program. I found the citizens' committee to be an invaluable resource. There is a lot of expertise on the committee that I can tap into. In addition, the committee ensures that our program is oriented towards the community. There are some limitations to this approach, however. They are volunteers who have a limited amount of time. You often have to do some of their footwork for them and a lot of their paperwork.

Our steering committee also includes advisors who come from the utilities, the school boards, the service clubs, the municipal government staff and the Chamber of Commerce. The appointed members seemed to lack the enthusiasm of our volunteers. If we were to start over I would ask the utilities for a representative to work with the committee on a continuing basis but I would only involve the other advisors in issue that impacted directly upon them.

Another point to remember in undertaking an energy management program is to keep the elected officials informed. Because we have had a lot of support from Councillor Jorna and our mayor, we neglected to keep our other elected officials informed. I don't think that was good for us. They are the ones who ultimately are going to be responsible for getting things implemented and they need to be kept fully informed.

You've heard the term "energy profiling" mentioned a couple of times today. Our profile took us a long time to do. I don't think it should have. We had to learn our way into it. Now the ministry has available reports on profiling and a computer program that should shorten the time considerably.

A source of information that I found useful was a profile of community groups. For example, it's useful to know who the contact person is for the builders association, the hotel/motel association, the Chamber of Commerce, and the Real Estate Board. It is useful to know when these groups meet, whether they bring in speakers, and whether they have a newsletter. With this information you can more effectively mobilize resources to help implement your program.

Another point that I would stress is to keep an identity for your program. I found that when people heard "Community Energy Management Demonstration Program" they said "Another government program, another one of those exercises". As soon as I started identifying with the Stratford Energy Centre people began to see the program more as a service. That led to a more positive response from the community.

To start a program, you don't have to be experts. There is a lot of information around and many experts to call on. And there are several provincial and federal government programs that can be used to support energy initiatives. A large part of my job was to ensure that information got filtered down to the community.

Community energy management can be a very frustrating process. It's not easy to define the scope of your program. The community is part of a much larger system and does not have much control over that system. For example, when I started I used a lot of Ontario Hydro conservation material. Unfortunately, they've undergone a change in perspective and I can't use some of their material any more. Our transportation component provides another example. As Brian mentioned, we have half a million visitors a year that normally drive into our city, one or two persons per vehicle. It would be good if they would carpool or come by train or the buses. But unfortunately the VIA Rail schedule doesn't coincide with the Stratford Festival Schedule. And VIA Rail is too large an organization for Stratford to have much influence over.

Because energy use is so basic, you're going to have to cover a whole range of activities. As a result, energy management planning impacts on a lot of other services and community groups. Most of the time you can only make recommendations to other agencies and groups and hope that they will be adopted. You can not control their activities and you can't tell them what their priorities should be. Consider the tourists who come to Stratford, for example. We conducted a survey and found that two thirds of the tourists would use a shuttle service if one was available. But organizing a shuttle service is beyond the scope of our program. And it will involve coordinating the activities of the motels, hotels, the Festival, and the public utilities.

Another aspect of our energy management planning process that caused a lot of frustration was defining the demonstration activities. Our program was oriented towards preparing a management plan and then having activities to test the plan and to give the program an identity in the community. Our committee, however, is more action-oriented than plan-oriented. Therefore, they wanted to see results. Results are a lot easier to come by when you run such events as a "Gas Miser Day" or an "Energy Conservation Week". It is a lot harder to "see results" when all you have is a plan that lists activities that will be undertaken. The program is to reach a compromise between plan formulation and demonstration activities.

Despite these frustrations, I think that energy management is a service that should be provided. Actions taken by the municipal government can help citizens to save energy and money. That money can be recycled back into the community in the purchase of local goods and services.

Councillor Micheal Jorna, City of Stratford

I think that our community energy management program is on track. A lot of our activities have been informal but we're working hard to pull it together. We are currently writing up the final version of our plan.

The next significant task to be undertaken is to educate my own council about community energy management. It's one thing to put a plan together. It's something else to get the powers in the community to adopt it and implement it. We as a city owe a great deal of thanks to our staff. But now as a politician I know I have quite a responsibility to get working and push it through.

BRAMPTON'S COMMUNITY ENERGY MANAGEMENT PLAN AND SHERIDAN/PEEL URBAN ENERGY CENTRE

Diane Sutter, Councillor, City of Brampton and Region of Peel

It is a pleasure to be here this morning to speak about Brampton's experience in the area of energy action. My city appears to have been very involved and very successful in this area.

In August of 1979, City Council approved a policy statement on energy conservation in our yet-to-be provincially approved Official Plan. This was preceded by what I understand was Canada's first solar zoning by-law, approved by the Ontario Municipal Board in July of 1979. This by-law has been very successful in producing as many new units with the potential of utilizing passive or active solar energy systems as possible, although it is a complicated by-law. Our progressive action resulted in the city being awarded the first plaque for energy planning by the Ministry of Housing.

I was slightly embarassed by this since, during our official plan discussions, the energy conservation policies were approved without any reference to housing densities, and council reduced the proposed densities in the new residential areas of the plan, obviously diluting the effectiveness of the energy measures. However, I really convinced that half a loaf was better than none. Unfortunately, density reductions continue to take place within the blocks of approved plans with resulting implications for existing servicing, transit, as well as for long-term energy conservation. All aspects of this will have cost implications for the taxpayer in the future.

In September 1980, Brampton established an in-house energy conservation committee chaired by our Commissioner of Building and By-laws. This committee proceeded to investigate and initiate programs to effect savings in the municipal infrastructure, beginning with an energy management system for our civic centre, and propane-powered vehicle conversion and purchase. And only this week, City Council approved a $172,000 weatherization program for all municipal buildings with a 1.5 year payback period. This committee now works very closely with John Bervoets, the energy auditor hired by the Region of Peel in co-operation with the Town of Caledon and the City of Brampton under the ministry's Municipal Energy Audit Program.

In addition, Brampton applied for and received funding, in June of 1982, of over $150,000, over a three-year period, under the Ministry of Energy's Community Energy Management Program, as a demonstration project. The program is operated under the guidance of Pam Schwartzberg. Pam is a policy planner on our staff, working in the energy planning area, and was transferred

to this program. I believe Brampton was one of the municipalities chosen because we proposed that the community outreach portion of the program should use existing community resources.

In November of 1980, the report of the Task Force on Energy Conservation in the Region of Peel was adopted by Peel Regional Council. One of the recommendations dealing with recovery from waste may come to fruition within the next year. Many of the other recommendations have been acted upon, but one of the chief ones was to establish a regional energy centre. David Olive of Sheridan College had been Chairman of the Task Force and, with his guidance and major assistance from Lynn Currie, the Peel/Sheridan Urban Energy Centre was established in August 1981. The centre is operated by a board of directors, composed of three persons from Sheridan College and three regional councillors. Its mandate, briefly, is to offer energy-related courses, workshops and seminars to both the public and private sectors, to provide a focus for related energy activities in the the region, and to maintain a community energy resource library. The centre is jointly funded by Sheridan College and the Region of Peel, with two years financial assistance from the Ministry of Energy. The provincial assistance expires at the end of 1983.

With the help of the community resource committees established by both the Demonstration Project and the Energy Centre, all the programs have gradually and effectively knitted together into a co-operative effort within Brampton. Pam and Lynn, along with John and staff from Brampton Hydro, are a real team with a lot of expertise.

To me, this is how it should be. The three of us are here together and really form a part of a collective presentation. Overlapping is not necessary if co-operative action takes place.

Pam Schwartzberg, Energy Manager, City of Brampton

In the recent past, energy planning was viewed by municipalities as the responsibility of higher levels of government since it was these levels that were responsible for resource management, energy supply, environmental protection and energy pricing. Perceptions of the municipality's role in energy conservation are changing slowly as the extent of municipal impacts are addressed.

The municipal corporation may conserve energy in three ways. The first is by making its own operations, buildings and vehicles more energy efficient, thereby reducing its own energy requirements and setting an example. The benefits of lower energy costs are provided directly to the municipal corporation and make additional funds available for other uses. The second way a municipality can conserve energy is through the revision of its policies and programs relating to the services it provides. The third role of the municipality is to regulate and promote the incorporation of energy considerations in the community as a whole. Planning for energy at the local level is important in order to make a community less vulnerable to the impacts of energy costs and shortages and thus to maintain a healthy and stable community.

As Councillor Sutter has so aptly indicated, the City of Brampton has become a focus for energy-related activities over the last five years. Initiatives have been taken by the city, the Region of Peel, Sheridan College, the Urban Energy Centre, Brampton Hydro, private citizens and local industries. While each of these agencies has been pursuing its activities independently, a network of energy activists has been forming.

In June of 1982, Brampton received approval from the Ministry of Energy to participate in the Community Energy Mangement Demonstration Program. The objective of Brampton's program is to develop an Energy Management Plan somewhat similar to an Official Plan to be adopted by council and implemented to reduce energy consumption in the community. Like any policy document, the process requires the collection of data, identification and analysis of measures, public participation and the setting out of long- and short-term strategies.

The CEMD program in Brampton commenced in July of last year. At that time, the Brampton Energy Task Force was formed, composed of representatives of industry, local utilities, school boards, staff and local politicians.

The initial task and a major component of the CEMD program was to establish a comprehensive data base of energy supply and demand in Brampton. In 1981, an energy demand study was prepared by Professor Reg Lang and a group of graduate students from the Faculty of Environmental Studies at York University. This "quick and dirty" study revealed that much of the consumption information was not readily available from the utilities. We felt that in addition to updating the student profile, the city may be in a better position and have more time to prepare a more comprehensive energy profile. The Brampton Energy Profile, completed in March of this year, provides consumption figures by sector, subsector and fuel type. To obtain the data, Brampton Hydro, Consumers' Gas and the local oil suppliers were contacted, as well as the hospitals, churches, schools boards, the Region of Peel and the city's energy technologist. Each of the utilities was asked to provide consumption data for the residential, commercial and industrial sectors and to break these sectors down further into Standard Industrial Classification Codes.

The Brampton Energy Profile will be used to identify critical areas for potential energy policies and measures and to ensure that energy-related decisions are based on accurate, comprehensive energy data.

The profile details energy consumption by fuel type and sector, residential energy use by fuel, transportation energy use by fuel, natural gas use by sector, and petroleum use by sector. All consumption data was compared to consumption figures for the province as a whole to determine where Brampton fits.

The findings of the Energy Profile indicated that the City of Brampton is in a generally favourable position with respect to oil consumption, probably due to the relatively young age of the housing stock and commercial and industrial buildings. However, due to the continuing growth rate of new housing and industries, there is great potential to build energy considerations into new developments. Alternatively, due to the commuting patterns of the labour force and the necessity for automobile travel within Brampton, the amount of gasoline consumed is high. Thus measures may be addressed to reduce consumption in this regard. Further energy conservation that exist within each of the fuel types, sectors and subsectors have also been identified.

The profiling process, while relatively time consuming (it took eight months to complete), was found to be a worthwhile exercise. It provides us with a benchmark from which to compare yearly trends in consumption. It provides us with hard data on which to base our recommendations to council. And most of all it develops a network of contacts in the energy supply and demand sectors. These results will certainly prove beneficial when the final plan is prepared.

In addition, the profiling process revealed that further information on the users and their attitudes to energy consumption was required to design and target effective energy conservation programs. To obtain this information, a series of energy surveys is being carried out. The first survey was an industrial energy survey. It was distributed by mail to the managers or presidents of all industries in Brampton. The survey was designed to achieve two objectives: 1. to obtain a building profile and consumption data for the Energy Profile; and 2. to determine the types of information and assistance that could be offered by the Urban Energy Centre.

Subsequent to the industrial survey, a survey of 400 residents in Brampton was undertaken. The objective of this survey was to develop a socio-economic profile of the households, a profile of the unit and its consumption patterns as well as attitudinal profiles of the residents. The results of this survey are presently being tabulated and analyzed. The results will be valuable in the development of energy policies relating to the residential sector. A commercial study will be undertaken later in the fall to provide needed information on energy use in retail stores, warehouses, offices and highrise apartments.

Once sufficient data has been collected, the basis for tracking energy consumption will be in place and data will be collected on a regular basis to enable us to identify trends.

While the development of an energy profile and a comprehensive energy management plan are important to a successful long-term energy management program, the goal of these programs must not get lost in the paper shuffling. The goal is to conserve energy and to conserve it within the city's own operations, through the city's policies and regulations of servicing and planning, and within the various sectors of the community. Since this is where Brampton's energy program orginated and where the actual savings are realized, it is important that the development of the Energy Management Plan does not cause a negative effect of the implementation of energy programs, but rather builds on the increased interest in energy resulting from the requests for data to stimulate implementation. Without an implementation program no savings will be realized and both City Council and the public will lose interest.

Brampton, in our energy management program, has taken this point very seriously. While collecting the much needed information it has also been forging ahead with a multi-faceted action program. Initiatives have been taken in all three of the energy management areas -- in-house, land use planning, and outreach.

1. In-house management:

A delamping program has been initiated in the Civic Centre Offices;

A waste paper recycling program has been initiated in the Civic Centre;

An energy data base and quarterly reporting computer program has been developed for city-owned facilities;

The Drive-Propane program has been utilized to allow all new municipal vehicles to be converted to propane;

Applications have been submitted to the Municipal Energy Conservation and Oil Conversion Program to permit the three facilities on oil that have natural gas available to convert;

The Municipal Energy Technologist is auditing city-owned facilities and making recommendations for energy conservation; and

A budget to weatherize all city-owned facilities was prepared and presented to the budget committee.

2. Land Use Planning

Official Plan policies have been prepared to encourage energy conservation in all new development;

Zoning by-laws have been designed to regulate the orientation and height of new residential units;

New provisions have been put in place to regulate the design of solar-oriented units including size and location of windows, overhangs and garages; and

Staff are working closely with builders and developers to maximize the energy efficiency of new housing.

Lynn Currie will be describing the outreach activities that the city and the Urban Energy Centre are involved in. There are two major projects which I would like to highlight, namely Enerfest '83 and the Brampton Enercentre.

Enerfest '83 is a month of energy related activities designed to stimulate community awareness of energy conservation in Brampton. Enerfest '83 was declared by the mayor and City Council at the request of the Urban Energy Centre. The Enerfest Steering Committee, composed of Lynn, John Bervoets, Glen Wood from Brampton Hydro, myself and three energy students, have been working solid for the past four months preparing activities for the month.

One event directed to the city staff is the Brampton Drive Save Challenge. Drivers of ten of the city's fleet vehicles have been keeping records of their fuel consumption and mileage over the last month. All of their cars will be tuned up and serviced and records will be kept for an additional month. The savings will be calculated and announced.

A second major Enerfest event for the city is the opening of the Brampton Enercentre. The Enercentre is joint project of the City of Brampton and the Urban Energy Centre. It is housed in the lobby of the municipal offices in space provided by Brampton Council. The construction costs for the centre were provided by the Ministry of Energy through the CEMD Community Project Development budget and the furnishings have been provided by the city and Sheridan College. The official opening and ribbon cutting will be held on October 6 with representatives of all levels of government, school boards, local utilities, politicians and staff present.

In conclusion, a key to the success of Brampton's energy program is the broad network of energy activities that have been developed over the last few years. Without this network and only the limited manpower available through the CEMD program, much of the activity in Brampton would not be occurring.

A second important conclusion that I have found after over a year of participating in the CEMD program is that without money for the implementation of energy conservation programs even the most fantastic energy plan will not result in energy savings. If the municipality is seen as the best vehicle for disseminating energy information to the community, which I see it is, then monies must be allocated to these agencies to deliver this message.

Lynn Currie, Project Coordinator, Sheridan/Peel Urban Energy Centre

I am pleased to be here today to speak to you about the Urban Energy Centre. As Diane and Pam have outlined, the UEC is a joint project of the Region of Peel and Sheridan College. We believe this combination to be unique in that a municipality has joined with a community college to provide education and training on this important topic. We are encouraged by the Ontario Ministry of Energy's support and most appreciative of their financial assistance over the past two years.

The UEC is located at the Brampton Campus of Sheridan College in an energy efficient demonstration building. While this location logically is an ideal place, over the past two years we have discovered some drawbacks to this location which I will discuss later.

Diane mentioned that the UEC is governed by a six member board. Reporting to the board, through the coordinator, are two advisory committees on Community Outreach and Industrial Programs. Membership on these committees so far is made up of individuals from the various energy interest groups in the community. In the coming year, it is expected that the membership will be extended to include citizens who are interested in promoting energy conservation.

By far, the UEC's most successful programs have been in community outreach. Public interest workshops have been held on a variety of topics dealing with energy conservation in the home. These have included weatherstripping, caulking, air leakage, woodstoves and fireplaces, heat pumps, alternative fuels for vehicles, furnace efficiency, insulation, ventilation, vapour barriers, renovations for energy efficiency, greenhouses, solar domestic hot water, energy efficient landscaping, and our most recent success, bus tours of homes using alternative heating methods.

These workshops have been run in the evening, usually over a three hour period. The are advertised in a variety of ways. Generally, advertisements are placed in local newspapers two weeks prior to the start of the workshop series. Announcements are sent to radio stations both locally and in Toronto, Hamilton, Burlington and Oakville. Flyers are sent to everyone registered on the UEC mailing list. Posters are placed in hardware and building supply stores and flyers are stuffed into customers' bags. Posters are also placed in all community and recreation centres, libraries and various city and municipal offices.

One might think that with all that promotion, we would be bursting at the seams with registrations. Unfortunately, that is not always the case. Traditionally, about 20 to 25 people show up per session. The exception is the spring series. We have come to know that interest in energy conservation diminishes greatly from March until September, especially after an extremely mild winter. You might think that there is nothing to do during these months. Quite the contrary! Planning, promotion and development of new programs is in the forefront. The number of attendees at our spring workshops have been as low as 3 or 4 and occasionally rises to 15. Naturally, the 3 or 4 who do come are provided with very personal attention and usually leave with all their energy problems solved. In an effort to create more interest in workshops this past spring, the theme of the series centered around cottages and how to extend the season. On a more positive note, however, the fall series are always a tremendous success. And for reasons not totally clear to us, we seem to have better success in Brampton than in Mississauga.

I mentioned a second advisory committee for industrial programs. Before I explain our current program and plans, I would like to relate some of our experiences with this part of the UEC.

In our original proposal to the Ministry of Energy, we described two functions of the UEC being community outreach and industrial energy management/conservation programs. We felt that of the two, the industrial program would be the one to eventually make the operation of the UEC more financially self-sufficient. It was our intention to run workshops for local industry on matters relating to energy management including auditing and implementation of an energy management program within the organization. It became apparent very quickly that, indeed, there was a need for such a program. A Program Development Coordinator was hired to liaise with local industry, assist in identifying their energy priorities and provide delivery of any required training.

After one or two successful programs, however, response from industry diminished. Around that time, the City of Brampton and UEC carried out an industrial enrgy survey in the city under Pam's program and, using data collected on the surveys, each company that responded was visited to ascertain their energy needs. Several workshops were scheduled but again the response was very poor. We believe that the recent severe recession was largely responsible for the lack of interest. People simply did not have the time or money to invest in workshops and programs. By the end of June, the situation had not improved and the UEC Board decided to abandon the industrial program for the time being.

Getting back to projects in which the UEC is presently involved, I think the most ambitious is what has been named Enerfest '83. At the request of David Ostler, Chairman of the UEC Board, Brampton City Council, at its June 6, 1983 meeting, proclaimed October Energy Awareness Month in Brampton. An Enerfrest Steering Committee was formed and a month-long calendar of events planned. The kick-off is an nergy Show at hoppers World Brampton which starts today. Twenty-five exhibitors have agreed to set up displays in the mall for the three day show. Platform programs have been scheduled for Thursday and Friday evenings and all day Saturday. Mayor Kenneth Whillans will officially open the Enerfest '83 activities at a special ceremony at two o'clock Saturday afternoon. Guest appearances by Bruno the Enerbear and E.T who says "Foam Home" will entertain the children and assist the platform demonstrations. On Sunday, October 2, a Weatheriza ion Workshop will be held at the Brampton Library from 2 to 4 p.m. Starting Tuesday, October 4th are the UEC workshop series which continue each Tuesday evening and occasional Wednesday evening as well as one Saturday until the end of October.

Next on the calendar is the Enercentre official opening on Thursday, October 6th. You may recall my earlier comment on drawbacks the UEC faced concerning its college location. While being housed in an energy efficient demonstration building on a fairly large campus of a community college has some advantages, the building is located at the end of the property and is away from the main flow of traffic. Apart from the fact that it's a terrific place to have an office, it does not provide the high visibility so urgently needed to encourage spontaneous community involvement. Thus, the concept of a separate drop-in centre came into being. Such a centre must be extremely accessible to the public as they go about their daily activities. The lobby of the Brampton Civic Centre was suggested and a proposal presented to City Council to approve the location. Since the objective of such a centre related directly to the long-range goals of the Community Energy Management Program, council approved the construction and operation of a drop-in centre or Enercentre as it has been named.

Staff will be available at the Enercentre to answer inquiries and provide information to the public on energy-related matters and to provide registration and promotion for the UEC programs.

Taking place on October 8th is a vehicle emission and tire pressure testing clinic. Open to the public, and sponsored by the Brampton Automobile Dealers Association, this free clinic will test approximately 100 cars for an analysis of the car's hydrocarbon emissions, carbon monoxide emmissions, idling speed and fast idle. In addition, the inspector will do a general engine analysis. Car owners will receive a written evaluation

of their car's performance and recommendations that could lead to greater fuel efficiency and reduced pollution at the end of the testing. A tire pressure check will also be done. The clinic is being carried out by inspectors from the Ontario Motor League Mobile Inspection Unit.

That takes us to the next event on the calendar -- the Enerfest Bike-a-thon scheduled for October 16th. There is either a 25 or 35 km route, depending on the fitness of the participants. Proceeds from the Bike-a-thon will go towards a special project being launched this year called the Seniors Weatherization Assistance Program or SWAP for short. This project has been designed for senior citizens whereby UEC staff -- called the SWAP team -- will provide free labour on installation of various weatherization products to deal with problem areas identified by an energy survey performed under Brampton Hydro's Residential Energy Advisory Program. Hopefully, by the start up of this program, a policy change under Canadian Home Insulation Program will allow the senior homeowner to apply for reimbursement for materials installed by the SWAP team.

The fourth weekend of Enerferst will promote paper and glass recycling. Service clubs, youth groups, church groups will all be encouraged to involve their members in this important activity.

During the last week of Enerfest '83, an Industrial Symposium is being sponsored by the Brampton Board of Trade. This two-day symposium will deal with energy conservation activities and programs local industries have incorporated into their operations. The objective of the symposium is to demonstrate how and where to begin an energy management program in industry and the potential savings which can be achieved. Speakers have been recruited from industries which responded to the industrial energy survey carried out under Pam's program. The symposium program consists of such topics as low cost/no cost energy saving measures, process efficiency, automatic control systems, and long range planning.

Also encouraged to participate in Enerfest '83 are the Peel and Dufferin Peel Separate School Boards of Education. Excellent response from these Boards and their principals has been received. Poster competitions, plays, puppet shows, the bike-a-thon and the inclusion of energy concerns in the curriculum are a few of the ways in which the schools can participate.

Throughout the month, various city in-house programs are being carried out. The Brampton Drive-Save Challenge is but one of them. Pam has already told you about that particular project.

The winners from the Bike-a-thon, poster competition and Drive-Save Challenge will be announced and presented with their prizes and awards by Mayor Whillans at the Brampton City Council meeting on November 7th.

There are a variety of other activities going on during Enerfest such as product displays in hardware and building supply stores, speaking engagements and demonstrations at service clubs and interest groups.

As you can see, Enerfest '83 promises to be a highly active month. And there are still so many other projects in which we could be involved. There just doesn't seem to be enough hours in the day and dollars in the kitty to develop and conduct all the programs we believe are needed in the community. This brings me to probably the most important fact to consider in establishing an energy centre - money.

The need has been recognized for programs such as ours. Finding the money to implement them is another question. The UEC is presently developing a comprehensive funding proposal for presentation to a number of potential sponsors. I am both pleased and excited by the commitment Sheridan College has made in this respect by providing the UEC with partial funding for the first three months in 1984. This support not only represents commitment from the College but leads the way for other sponsors to examine the programs offered by the UEC. In order to enhance and simplify this support, the proposal has been divided into six major service categories: seminars, workshops, seniors weatherization assistance program, the Enercentre, housewarming parties, and religious buildings program. It is our hope that potential sponsors will recognize a means of achieving some of their own goals through financial support of the project.

There are so many other things to be said about the centre but time will not allow for that today. I have tried to present a broad overview of the UEC's operation in the hope that many of you will seriously consider such a project in your own city. We look towards the future and do our best to be ready for it.

Diane Sutter, Councillor, City of Brampton and Region of Peel

At the beginning of this presentation I said that "my city appears to have been very involved and very successful in the area of energy action", and we have been, as you have heard. But there are some problems.

1. Brampton has had the ability to integrate its programs. The Energy Centre, the audits, the involvement of Brampton Hydro through their residential energy audit program are examples. This is not so in Mississauga. That city has an excellent in-house program, but Missisauga Hydro is not involved. The Enercentre drop-in idea should be duplicated in Mississauga, either by the U.E.C. or the City. We all hope that the Cities' Energy Conference, to be held in Mississauga in 1984, will help act as a catalyst for the development of more community-oriented programs within that city.

2. Money, of course, is the biggest problem. The ministry's programs have been excellent and much appreciated. However, they are being cut off at a time when all municipalities have a tight money situation and 5-6% per cent budgets. We must spend to save but the money is not there to spend. The energy program's savings are tax oriented but, unfortunately, they are not always visible, like the weeds in the parks. Politicians, being policitians, will cut programs that are not too visible. The $172,000 for weatherization I mentioned is for levies not taxes. I doubt it would have happened otherwise.

3. Public understanding and involvement is difficult, especially when your year-end gas bill has a one and a third month's credit. "Where is the energy crisis?" they say. But the gas companies are having financial problems.

4. Political interest is slow. A few get involved but it is an uphill battle to sell the others. It is not a high priority with most politicians. The minister's presence at events certainly would help to increase their awareness.

We are proud of our accomplishments and would hate to see them all die. Without the Ministry of Energy's funding programs, very little would have happened. But like any community group, in order to be effective and not a flash in the pan, community and government commitment must be there. Expectations built up and then dashed to the ground create credibility gaps which often cannot be overcome.

I think the challenge facing us all is how to avoid this. Listening to what has been done is great. But where do we go from here is far more important. Where are we going?

LUNCHEON ADDRESS

CITIZENS' CONSERVATION CORPORATION, BOSTON MASSACHUSETTS

Charles Haun, Vice-President and Executive Director

The Citizen's Conservation Corporation is a spinoff from the Citizen's Energy Corporation, a non-profit organization founded in 1979. The Energy Corporation's objectives are to make energy available and affordable to the poor and the elderly, to establish energy alternatives which help economically oppressed people become self-sufficient, and to improve understanding and cooperation among nations especially between the United States, OPEC countries and the developing nations dependent upon oil. CEC aims at taking profit out of oil and returning it to those people especially hard-hit by escalating energy costs. To achieve this, the corporation purchases crude oil at market prices (e.g., from the Venezuelan national oil company), transports it to a refinery which breaks it down (into gasoline, heating oil, etc.,), transports the products to Massachusetts, and distributes them to needy households at substantially below-market rates. CEC also generates alternative energy projects in the oil-producing countries or in other developing countries. It allocates 25 per cent of all money to this end.

The Citizen's Conservation Corporation is also non-profit. Our focus with the CCC is on improving residential energy efficiency. We enter into contracts with individual landlords and tenants to provide financial assistance for conservation improvements tha have short-term paybacks, significantly reduce the amount of oil consumed, and reduced the financial burden for the consumer. We have found that an expenditure of $1,000 - $1,500 produces a saving equivalent to about one-third of the energy bill.

Much of our emphasis has been on tenants. Government programs tend to concentrate on single-family homeowners. But approximately 70 per cent of low-income and elderly people live in apartments. And energy-saving traditionally has not been in either the landlord's or the tenant's interest. Improvements made by the tenant may simply create savings for the landlord. On the other hand, landlords hit by increasing energy costs simply raise rents, leaving tenants with the choice of bearing the costs or moving out.

After consulting with landlords, we decided to develop a program aimed both at building owners and tenants. We take a look at a cash flow created by owners in paying energy bills and at possible incentives tenants might have to save energy. Under the program, a building owner agrees to pay cash to the corporation in an amount equivalent to that paid for oil over the past five years, based on the landlord's previous energy bills. The corporation uses this money to make improvements to

the building and it assumes responsibility for the building's energy costs. Renters are involved in the conservation effort; they are offered cash in return for conserving actions. In larger buildings, meters are installed to monitor energy use by each apartment.

The benefits of the program accrue mainly to tenants who have reduced energy bills and more comfortable accommodation. But landlords benefit too, from improved buildings and lower energy costs as well as from being able to avoid certain capital expenditures that they would otherwise have had to make.

The program has not been problem-free, however. Among the difficulties experienced are:

High interest rates which created problems with the cash flow approach and extended payback periods. The corporation convinced the state government to provide a $300,000 grant (which the state obtained from Chevron for overcharges to its customers) that was used to reduce interest rates to 11.5 per cent.

Unreliable energy audits which were used to determine what improvements were needed. Initially, audits were contracted out but the results were unsatisfactory -- expected savings were not achieved and audit firms were not accountable for the claimed savings. The corporation decided to hire and train its own auditors. In centrally heated buildings it now guarantees energy savings.

Difficult program to run for a number of reasons outside the corporation's control such as the loss of interest on the part of energy consumers in the summer months and yet the need for a year-round effort.

Nonetheless the concept is sound. Private utilities and the state housing department support state-wide expansion of the program. Energy use in the buildings, however, needs to be monitored and each owner should be given a graph comparing projected energy use with and without the program. Also, more public support is required. There is a need for more leadership in this regard, for financial subsidies perhaps including interest-free loans, and for owner/tenant energy education.

QUESTION PERIOD

Question: What happens when a building is sold?

Mr. Haun: The loan is paid off. The corporation has been selective about building owners it works with; we try to avoid speculators and concentrate on smaller, owner-occupied buildings where transaction costs (drawing up agreements, dealing with third parties, etc.,) are not so high.

Question: What proportion of the program is consumed by transaction costs?

Mr. Haun: It's hard to quantify as the program develops and changes. For example, consider a recent builder with eight units and $10,000 in improvements - to cover the corporation had to charge $3,000, producing a total cost of $13,000 and a five year payback. But on other larger buildings, transactions costs would be much higher. Part of the cost is in persuading owners. Here previous customers have been helpful. Still, building owners do have trouble understanding the concept; they grasp the basic principles but have trouble with the details.

Question: Are there short-term benefits to landlords?

Mr. Haun: Landlords like to have someone else, who they can trust, take care of energy conservation for them. The corporation guarantees savings, does audits, supervises contractors, etc. The units are improved and complaints are fewer.

Question: What is the largest building done under the program?

Mr. Haun: 132 units. We're looking at one with 400 units.

Question: At the end of four or five years, what control do you have over disposal of the savings?

Mr. Haun: None.

Question: What kind of improvements are made under the program?

Mr. Haun: Everything that will pay back in five years. This includes, for example, replacement of heating plants, attic insulation, wall insulation if appropriate, interior storm windows (more effective than exterior), air balancing systems in larger buildings, and underground heat pumps to provide domestic hot water. The measures are building-specific.

Question: Have you been able to attract financing from commercial banks?

Mr. Haun: No, we've not been successful with that.

Question: Is your kind of corporation competitive with other firms offering energy services?

Mr. Haun: Other firms tend to concentrate on individual homes and commercial buildings so we're not in direct competition with them. We are expanding our efforts to include public sector buildings such as schools and municipal buildings and will be looking to this for profit. So down the road we may be coming into competition with other firms.

ditor's Note: Mr. Haun's address was not taped. The above report is a digest of his presentation. Information on the Citizens' Energy Corporation was also drawn from an interview with Joseph Kennedy II, founder and president of the CEC, reported in Renewable Energy News, June 1982, p.7.

COMMUNITY ENERGY ACTION: GETTING INVOLVED

John Lounds, Energy Planning Analyst, Ontario Ministry of Energy

During the past two years, unemployment and economic performance have become the focus of much attention and concern. If you were here this morning, you would have heard Doug Raven of Burlington discuss this. In this same period, and in contrast to the high profile these issues get, people have been receiving mixed messages about energy. While prices have remained high, the dramatic increases we had seen in energy prices have ended, at least for now. It appears that today there exists an abundance of oil, electricity and natural gas. The relative stability of the energy situation, as opposed to these other issues of unemployment and the economy, is indicative of why attitudes towards energy issues have changed in such a relatively short time. Energy is not perceived today as the problem it once was.

These recent attitudes towards energy issues and energy efficiency have important implications for those of you -- planners, municipal councillors, and community leaders -- who wish to get involved in community energy action. While the need to act is still imperative, the urgency to do so seems to have all but diappeared.

This can be easily illustrated when one tries to run a community program. For instance, it becomes harder to motivate people to undertake energy efficiency projects. Also, the development of public and political support for an energy program becomes increasingly difficult, as many of our speakers have pointed out.

Not only have community activities been affected by today's energy situation, so have provincial activities. While continuing to pursue Ontario's and Canada's energy goals, programs undertaken by the Ministry of Energy have reflected changes in attitudes towards energy.

In this context, we would like to outline our ministry's involvement in Community Energy Action and the projects and information you can use to get your municipality involved. First, to encourage energy efficiency in municipalities. Then, Chris Gates will reveiw our current research work in greater detail. Finally, I will briefly present the directions in which the ministry is headed in energy action.

Over the past several years, the ministry has promoted a number of different programs. These have included programs focused on:

1. Municipal Operations. The Municipal Oil Conversion and Energy Conservation Program which provides grants for conversion of oil furnaces and improvements to municipal buildings. This program will run for one more year. The ministry also promoted the Municipal Energy Audit Program.

2. Strategic Energy Planning. You have heard representatives from Burlington, Ottawa, Stratford and Brampton describe their efforts to prepare community energy management plans. Burlington is now in the implementation phase and Ottawa and Brampton each have another year and a half to go.

3. Outreach Assistance. The ministry has attempted to provide support and assistance for community-based demonstrations. Projects such as the Urban Energy Centre, which you heard about this morning, and Toronto's ECCO project and Energy Savers Peterborough are examples of the ministry's efforts to promote outreach activities. Our aim is to test the feasibility and effectiveness of providing information through community networks. These demonstrations help us to develop and assess different techniques such as housewarming parties.

4. Land Use Planning. Finally, we have been helping municipalities to examine their land use practices to ensure energy-efficient development. The Energy Conservation Through Land Use Planning Grants is one of the means we used. We are also preparing Energy Handbooks for Planners.

As can be seen, the emphasis of past ministry programs has been on demonstration activitiy. Out of this work has come some interesting and useful research. Chris will now detail one aspect of this research -- the Energy Handbooks for Planners.

Chris Gates, Energy Planning Analyst, Ontario Ministry of Energy

One obstacle to the incorporation of energy considerations in land use planning has been the absence of clear guidelines explaining methods and techniques for doing so. The ministry solicited the views of planners in both the private and public sectors concerning this problem and subsequently commissioned ten Energy Handbooks for Planners. A Handbook Advisory Committee was established to assist the ministry in this task. Membership on the committee included representatives from rural and urban municipalities, the Ministry of Municipal Affairs and Housing, and the Ministry of Energy. I would like to review the handbooks and discuss how they can be used to develop policies and strategies for energy-conserving land use planning.

The first handbook is a Glossary of Terms for Planners. Energy conservation is a new subject for most planners and it is difficult to become conversant in the terms, abbreviations and mathematics that are used by energy experts. The glossary is a straightforward reference that can serve as a useful introduction to the subject.

The second handbook provides an overview of "Solar Energy and Land Use". It discusses the effects that solar technologies could have on building design and land use patterns as well as ways of accommodating these technologies. The manual covers such topics as processes for converting solar radiation into useful energy, cost effectiveness of solar energy systems, and the application of solar thermal systems for space heating and water heating.

Solar zoning techniques are discussed in the third manual. In order to protect solar access, it is necessary to understand how the sun tracks through the sky during the day. The manual explains basic solar concepts such as solar angles and the principle of the solar zoning envelope. I think most people are familiar with the concept of a solar zoning envelope. If you consider it in terms of a building set back and height limitation, a solar envelope is the shadow that would be cast or the arc traced by the sun at three o'clock in the afternoon and nine o'clock in the morning. The objective is to identify the envelope within which you can construct a building without casting a shadow onto an adjacent structure. It is pointed out in the manual that there are number of factors that influence the size and shape of the envelope. They include latitude, slope, orientation, and existing development patterns.

Of course it is much easier to guarantee solar access in new developments where there are no existing buildings than in the built-up areas of a community. There used to be some concern that solar zoning by-laws would be difficult to implement under the Ontario Planning Act. This is not the case. Solar zoning bylaws are not only practical but also enforceable. The new Plannning Act explicitly recognizes energy conservation as an area of provincial concern. So we are hoping to see more municipalities follow Brampton's example and use their powers to protect solar access.

Another topic that I think is of interest to land use planners is the use of landscaping to improve the energy efficiency of developments. Our fourth manual goes into this subject in quite a bit of detail. It covers the impacts of climatic characteristics on energy consumption and on human comfort. It then examines the role of planning and urban design in modifying these impacts as well as the costs and benefits of various approaches that can be taken. There was a study done in Pennsylvania that showed that the planting of decidous trees in a mobile home park reduced the energy required for air conditioning by about 75 per cent. If you translate that energy savings into dollars, it demonstrates the considerable benefits that can be derived from landscaping measures. The manual emphasizes urban residential examples but there are some rural components as well. It also includes many useful illustrations.

We had a number of planners point out to us that there was an over-emphasis in the literature on urban planning principles that are not easily transferred to rural settings. We attempted to deal with this problem in our fifth manual, "Energy and Rural Land Use Planning in Ontario". The manual looks at land use from a rural perspective and suggests principles that can be applied to rural settlements. The point is made in the manual that the spatial distribution of rural land uses is closely linked to some sort of primary economic activity. In southern Ontario, this activity tends to be agricultural, in central Ontario it is recreation, and in northern Ontario it is resource extraction. The manual develops three baseline township models based on agriculture, cottage development and pulp and paper industry.

It establishes for each a basic level of energy consumption and then suggests ways of reducing this consumption. The main alternatives that are suggested include centralized or cluster development in existing or proposed hamlets and limiting non-farm or scattered development. In virtually every case there is the finding that by limiting scattered development and revitalizing existing communities there would be an across-the-board reduction in total energy consumption as well as per capita energy consumption. The document also highlights the importance of taking into account climatic factors and in applying energy conserving landscaping measures. It also suggests official plan policies and zoning regulations to implement the recommendations outlined.

Our sixth handbook focuses specifically on climate. Climatic Information for Energy Conscious Planning, is a companion to the landscaping manual. It makes the point that we tend to forget the role of climate in defining urban areas. Because we have been able to manufacture climatically controlled environments, we have forgotten the kind of influences that climate can have on our settlements. The handbook on climate concludes by identifying official plan policy statements and zoning statements that could be put in place to implement the recommendations for energy-conserving planning.

You've heard a fair amount this morning about community energy profiling and the work that the four community energy management demonstration communities have done in this area. We have produced two manuals on energy profiling. One, titled The Community Energy Profile: Concepts, Methods, Applications, provides an introduction to the tool. The other, called Guide to Community Energy Profiling provides a step-by-step account of the profiling process. Both documents address the role of the community energy profile in the energy management planning process. The profile is described as a method for analyzing energy consumption in a community, as a basis for devising energy management plans.

The introductory manual looks at some of the concepts that underline the energy profile focusing in particular on the U.S. experience with building energy audits and community energy planning. It examines five methods that were used in the United States and assesses in some detail one application, the Comprehensive Community Energy Management Planning Program that was applied in sixteen cities. The conclusions reached in the manual are similar to those discussed earlier today. The profile can be quite useful in providing a data base that informs you of where your community is in terms of energy consumption. If you don't understand where the energy is coming from that is used in your community, how it is distributed among the various sectors, and how it is used in those sectors, it will be difficult to develop a long-range plan.

The profile, however, is only a starting point and a means to a much broader end. It is only an end in itself. A good profile can be important in legitimizing municipal actions. As we have learned here today, it is possible to begin taking action without a detailed understanding of how energy is used in the community. But at some point, this understanding will be necessary, especially when the more involved and costly measures are being considered.

The final handbook that I would like to discuss is called Estimating Energy Consumption for New Development. It's my favourite. A lot of my former colleagues in the Region of Peel

WORKSHEET NO. 1

NO. ☐☐☐

RESIDENTIAL ENERGY CONSUMPTION

SINGLES

1 Unit Type	Plan Data		Energy Coefficients (MJ/unit/year)				8 Total of Energy Coefficients (MJ/unit/year)	9 Annual Energy (GJ)
	2 Number of Units	3 Gross Floor Space (m^2)	4 Space Heating	5 Space Cooling	6 Water Heating	7 Lighting and Appliances		
Source	User	User	Table A1	Table A7	Table A8	Table A9	4+5+6+7	2X8÷1000
SFLS			+	+	+			
SFR					+	+		
SFSL	100	108	159,400	+ 9,600	+ 24,100	+ 21,000	214,100	21,410
SFTS	214	103	146,900	+ 9,600	+ 24,100	+ 21,000	201,600	43,142
SD			+	+	+			
RH			+	+	+			
OTHEF			+	+	+			
			+	+	+			
			+	+	+			
			+	+	+			
ALR			+	+	+			
AHR			+	+	+			
OTHER			+	+	+			
			+	+	+			
			+	+	+			
			+	+	+			
			+	+	+			
tal Units	314	11						

S - Single Family L-Shaped
! - Single Family Regular
L - Single Family Split Level
S - Single Family Two Storey
- Semi-detached
- Row House
- Apartments Low Rise
- Apartments High Rise

10	Total Annual Residential Energy Consumption = (sum of Items in Column 9) (GJ/Year)	64,552

Enter in Column 3 of Worksheet No. 7

12	Residential Energy Consumption Indicator = 10 ÷ 11 GJ/unit/year	206

Enter in Column 6 of Worksheet No. 7

WORKSHEET NO. 1
RESIDENTIAL ENERGY CONSUMPTION

NO. SEMIS

SEMIS

1 Unit Type	Plan Data 2 Number of Units	Plan Data 3 Gross Floor Space (m^2)	Energy Coefficients (MJ/unit/year) 4 Space Heating	5 Space Cooling	6 Water Heating	7 Lighting and Appliances	8 Total of Energy Coefficients (MJ/unit/year)	9 Annual Energy (GJ)
Source	User	User	Table A1	Table A7	Table A8	Table A9	4+5+6+7	2X8÷1000
SFLS			+	+	+			
SFR			+	+	+			
SFSL			+	+	+			
SFTS			+	+	+			
SD	564	103	132,600 + 7,700 + 25,400 + 21,000				186,700	105,299
RH			+	+	+			
OTHEF			+	+	+			
			+	+	+			
			+	+	+			
			+	+	+			
ALR			+	+	+			
AHR			+	+	+			
OTHER			+	+	+			
			+	+	+			
			+	+	+			
			+	+	+			
			+	+	+			
			+	+	+			
tal Units	564	11						

S - Single Family L-Shaped
- Single Family Regular
L - Single Family Split Level
S - Single Family Two Storey
- Semi-detached
- Row House
- Apartments Low Rise
- Apartments High Rise

10	Total Annual Residential Energy Consumption = (sum of Items in Column 9) (GJ/Year)	105,299

Enter in Column 3 of Worksheet No. 7

12	Residential Energy Consumption Indicator = 10 ÷ 11 GJ/unit/year	187

Enter in Column 6 of Worksheet No. 7

WORKSHEET NO. 7
ENERGY CONSUMPTION - SUMMARY

Singles

Line No.	1 Category	2 Worksheet Source	3 Total Annual Energy Consumption GJ/year	4 Distribution % (Total of 100)	5 Worksheet Source (Indicators)	6 Energy Consumption Indicators
7	Residential	No. 1 Line 10	64,552	77.5	No. 1 Line 12	206 GJ/Unit/year
8	Commercial and Institutional	No. 2 Line 13	2,292	2.8	No. 2 Line 14	1.6 GJ/m²/year
9	Industrial	No. 3 Line 8	0	0	No. 3 Line 9	0 GJ/ha/year
10	Transportation	No. 4 Line 26	15,657	18.8	No. 4 Line 30	048 GJ/m²/year
11	Construction	No. 5 Line 15	6	-	No. 5 Line 16	.0002 GJ/m²/year
12	Operation of Services	No. 6 Line 7	774	0.9	No. 6 Line 8	.023 GJ/m²/year

13 Total Annual Energy Consumption of Proposed Development (Sum of Column 3): 83,281. GJ/year

13,050 bbl oil/yr.
477,750 fcl/yr.

Semis.

Line No.	1 Category	2 Worksheet Source	3 Total Annual Energy Consumption GJ/year	4 Distribution % (Total of 100)	5 Worksheet Source (Indicators)	6 Energy Consumption Indicators	
7	Residential	No. 1 Line 10	105,299	80.1	No. 1 Line 12	187 GJ/Unit/year	↓9.2%
8	Commercial and Institutional	No. 2 Line 13	2,292	1.7	No. 2 Line 14	1.6 GJ/m²/year	
9	Industrial	No. 3 Line 8	0	0	No. 3 Line 9	0 GJ/ha/year	
10	Transportation	No. 4 Line 26	22,824	17.4	No. 4 Line 30	0.39 GJ/m²/year	↓19%
11	Construction	No. 5 Line 15	9	-	No. 5 Line 16	.0002 GJ/m²/year	
12	Operation of Services	No. 6 Line 7	1025	0.8	No. 6 Line 8	.047 GJ/m²/year	↓26%

13 Total Annual Energy Consumption of Proposed Development (Sum of Column 3): 131,449 GJ/year

→ 58% ↑ in energy consumption
• 80% ↑ in units

21,350 bbl oil/yr.
754,215 fcl./yr.

where I used to work would say to me, "If we get a subdivision or a secondary plan in, how do we know that it is more or less energy efficient than other developments? We don't have a way of calculating the energy consumption that is involved." The point was well taken. The manual that was developed provides methods for estimating total annual energy consumption in a development. It can be applied at the subdivision scale, the secondary plan scale, or to a town centre.

The scales of application are quite wide. The method employs a series of worksheets. An example of a residential worksheet is shown below. This worksheet would be filled out by the development control planner who receives the housing proposal. The example worksheet is for a 314 unit subdivision located in Orillia. The "plan data" would be derived from the plan proposal. The "energy coefficients" would be obtained from tables in the appendix of the handbook. To fill out one of the tables all that is needed is a pocket calculator. The example indicates that a subdivision plan with 314 units will consume a total of 64,552 GJ/year or 206 GJ/unit/year. If the allocation of units is adjusted, for instance, to reduce the number of single-family units and increase the number of semi-detached units, the actual amount of energy saved can be calculated.

Worksheet 7 provides a summary comparison of the two plans. Line 13 indicates that the total annual energy consumption for the semi-detached development would be 131,449 GJ/year compared with 83,281 GJ/year for single detached, or a 58% increase in energy consumption. However, the utility of the worksheets lies primarily in comparisons of column 6. Here, we see that, on a per unit basis, the semi-detached development actually consumes 9.2 per cent less energy than the singles for residential development; 19 per cent less energy for transportation per m^2/year; and 26 per cent less energy for operation of services per m^2/year.

This comparison suggests the inherent greater efficiency of denser forms of land use. In this case an 80 per cent increase in the number of dwelling units could be achieved, at a 58 per cent increase in the overall energy consumption, but at significant reductions in energy consumption on a per unit or per square metre of service basis.

There are other kinds of worksheets that can be used. These include worksheets for transportation options, commercial and institutional uses, industrial uses, the cost of construction, and the cost to the municipality of providing services including police and fire protection. By filling in worksheets for each option, it is then possible for the planner to determine the energy savings accruing to each development alternative and to weigh this against the costs and benefits of different land use patterns and density allocations.

I'm not suggesting that the decision to approve or not approve a development application should be based totally on energy consumption. What the ministry is trying to do is encourage more municipal officials to develop some expertise and understanding of the energy implications to land use decisions and to consider energy as another element in the land use development process and make it part of good comprehensive planning.

Due to time constraints, I won't into detail on our tenth handbook. I'll just say that it focuses on alternative energy supplies and technologies and their implications for land use planning. All of the manuals are available from the ministry.

In summary, I hope that I've shown you that the manuals cover a wide range of planning contexts from the site specific to the overall official plan. We hope that the manuals will have wide application. And if you should have any difficulty in applying them, please do not hesitate to call and let us know.

John Lounds, Energy Planning Analyst, Ontario Ministry of Energy

The research that Chris has described has flowed to a large extent from a number of the demonstration projects which the ministry has funded. I'd like to focus now on some of the future directions which the ministry is looking at.

As Chris mentioned, part of our information resource package is the Energy Handbook for Planners. We have found that the provision of up-to-date information on energy projects and programs is important to making sure that a community group or municipality can carry out their activities. We are continuing our efforts to provide information with the production of the Energy Action Case Studies which outline each of the projects presented today as well as the Heat Save Program.

In addition to these information resources, the ministry is providing technical advice to municipalities and community groups. Our advisors are available any time to come to your municipality and help out. We are also working on the development of computerized energy analyses in order to reduce the complexity of conducting certain technical studies. At the moment we are creating two packages. One is a shadow mapping package and the other is a community energy profile package. We're hoping to test the shadow mapping package shortly. The energy profile computer program will follow.

We're continuing our demonstration assistance in funding innovative projects. While we don't have a current grant program for outreach initiatives, we recognize that we need more demonstrations and we're always open to any proposals that you may have. We also have the Municipal Oil Conversion and Energy Conservation Program, and the Conservation and Renewable Energy Demonstration Program. You can get information on any of those programs by calling the ministry.

Finally, we're hoping to offer, in the near future, seminars and on-site advisory services. Chris is working on the development of land use planning seminars based on the handbook material. Our advisors are also available to come to your municipalities to help you with energy strategy assistance. We can also provide displays, literature, and advice on how to set up your process. Our program on Community Energy Action has moved from demonstrations to this provision of technical assistance and help in the implementation of programs. We hope that you'll take advantage of this assistance.

We at the ministry would like to thank all the municipalities who have been involved with our projects and programs. As you can see, it is a wide and varied audience that is involved in these projects. We hope that you have found one aspect of the presentations here you'll be able to take back with you and that you will continue to work in this area.

ENERGY SAVERS PETERBOROUGH

Dr. Peter Adams, Chairman, Energy Savers Peterborough Task Force

The energy management programs which you have heard about today were funded in the range of $50,000 to $150,000 by the Ministry of Energy. The project which I am going to talk about did not receive any direct funding from the Ministry of Energy. And it did not receive any municipal funds. I hasten to say, however, that we have received enormous support from both levels of government. We have had consistent non-monetary backing from the City and County of Peterborough and from the Ministry of Energy. In fact our project got started at the initiative of the ministry. We have received, in our view, some of the more sophisticated, efficient than any project of which we are aware. My point is that energy projects can be helped along in many ways in addition to money and I would recommend the approach that we took.

Peterborough, as you know, is a small community and perphaps a bit more industrial than most people think. The city ranks 17th in the country in terms of manufacturing employees. On the other hand, it is located in an agricultural county. There are about 65,000 people in the city and another 40,000 in the surrounding county. Peterborough, unlike so many municipalities in the Metro Toronto area, is not an extension of Metro. Peterborough is relatively cut off from Metro and exists as an isolated industrial and agricultural community. This has many advantages for projects such as ours. For example, Peterborough is the media centre for its area. If we hit a few media outlets, we get coverage for the entire community.

Energy Savers Peterborough was an experiment to see if a community could run its own volunteer energy conservation program without direct ministry or municipal government involvement. I'd like to give you a history of our project, discuss some examples of the activities we have conducted over the last eighteen months or so, and then comment on a few key aspects of our work.

In January or February of 1982, a group of people from the ministry came to Peterborough and identified groups in the city who might be able to get involved in energy conservation. They started with the city itself. The first time I heard about this was when I got a phone call from the mayor asking me to attend a meeting. I agreed to go. There were about 25 people there including ministry officials. The ministry staff outlined the proposal for an energy conservation project. I had no previous involvement in energy conservation and neither did some of the others at the meeting. The ministry officials said that they wanted to see what could be done on a volunteer basis, without provincial funding. Then the mayor got up and said that he thought the project was a great idea and the municipality wasn't going to provide funding either. They asked us if we were willing to take on this project.

We started with a group of 25 people. In the end we were left with about 18. Our group included the obvious people: city officials including an alderman; a reeve from the county; public utility representatives; people from the community colleges, the universities and the schools; industry representatives; media representatives; and people from the service clubs. All had been approached through their various organizations although they were not representing them. The ministry gave us a simple mandate: increase local awareness of energy conservation and of means of conserving energy. They told us we could do whatever we liked but that we had to have a kick-off week in May and that the minister would come.

The kick-off week was very clever organizational device and I'm sure that the ministry thought about this. I'm sure you know that to start something in February and to get it going full speed in May is not only impossible, it's stupid. Everything starts in September. If you're a service club, you change your executive in the spring, you get organized in the summer, and you start your program in the fall. But we were told to start in May. We told them that we couldn't do it and that we didn't think that it made sense. However, they convinced us to give it a try. Their approach was clever. It made us work hard. If we had started in September I'm sure we would not have got a good a start.

So we sat down and got to know each other. And then we started to develop some ideas. The first thing we focused on was a name for the project. A name is very important. We came up with a terrific one, we thought - Energy Savers Peterborough. Do you believe in ESP? That name has helped us a great deal. For example, in our surveys we asked people whether they had heard of ESP and hundreds of people said yes, of course. Ten per cent knew that ESP has to do with energy conservation. The rest thought that government was trying to read their minds.

The next thing we did was come up with a logo. Like names, logos are very important because it gives you recognition. Everybody in the advertising business knows this. In our line of business it's also important to have a logo that is cost-effective. Our logo was designed to be compatible with the Ministry of Energy's so that we can cover up the ministry's logo and use their buttons and flyers. Covering up their logo helps us to dissociate ourselves from the ministry which is necessary from time to time.

Then we began to tackle the problem of getting our project going. Every project needs a centre and so we decided to look for a store. That's not difficult in these times because there are plenty of empty stores. We managed to get a store that we lease for a $1 a year. We still have it for at least another year. We conducted a fund raising drive to get money for the utilities and other services. We raised a few thousand dollars. The Ministry of Energy and other provincial ministries gave us material to put in the store. They've got tons of stuff. We also got material from federal departments and the private sector. Everybody has got literature. And so truck loads of material arrived at our place.

We turned out attention to the kick-off week. What were we going to do? Some of the groups were into energy conservation and others were not. But there were plenty of ideas around. We planned such things as a visit to a local farm energy conservation project, a bus tour of local energy-efficient homes, visits to a local industry that was experimenting with a natural gas engine, a church seminar focused on a church that was active in the energy conservation area, science fairs in the local schools, and poster contests. We focused only on local activities. The minister's visit was quite useful in attracting media attention. We took him on a tour and he spoke at a dinner that we had organized. All the people in the organizations we wanted support from were invited to the dinner.

All in all it was an effective kick-off. The store became the focus of our activities. It was run initially totally with volunteers. In the summer we managed to get grants to hire students. In the fall we were back to volunteers, mainly senior citizens. It was difficult to maintain the schedule that was required. The plaza managers wanted us to open at nine and maintain regular hours just like everyone else doing business there. After a few months we managed to get a make-work grant to hire people who had run out of unemployment insurance benefits. For a year we had a staff of five.

In addition to maintaining the store we ran a variety of other volunteer activities. These included drive-save events, tire checks, tune-up clinics, seminars, an arena workshop, an agricultural workshop, church workshops, a senior citizen advice service, caulking and weatherstripping workshops, a demonstration hands-on event involving the construction of a solar greenhouse, energy conservation demonstrations in the school which also involved giving each school in the county a kit of material, science fairs, other competitions such as the best solar weiner roaster and solar oven, a speakers bureau, wood stove seminars, alternative technology displays, tours of energy-efficient residences and buildings, booths at county fairs and trade fairs, film nights, and the great ESP trivia challenge. All were widely advertised for free.

We are concerned about how to institutionalize this activity to keep the momentum going. One approach we are using is an energy conservation event at the local library. The objective is to focus attention on the fact that the library, not us, is the best source of energy conservation information in the community. The library didn't realize that of course. But this event will help to provide one permanent base for our energy conservation initiatives. The Minister of Energy is opening the event, the energy bus will be there, energy skits will be run in the library hall, schools will be bussing children there to see the displays, a nuclear power debate will take place as well as talks on solar power and do-it-yourself insulation. More importantly, the library has produced a guide to energy conservation information. This resource will be there for years.

Let me now make some overall observations on the approach we have taken. The store front has been a tremendous focus for us. We meet there every two weeks, the media knows where to find us, and we're visible to the public. It is the key to our information service. This service relies on the tie lines we have to the provincial ministries. Even with the most willing volunteers, however, my colleagues and I are unable to maintain a store front like that without some paid help. We've made use of grants but we can't rely on this.

Our group is very diversified. We had pro-nuclear people, anti-nuclear people, managers of industry, union people, teachers and many others. One of the first things we had to do was thrash out the political side of energy conservation. Unlike some of the groups who spoke here today, we decided not to bring politics into our approach. We are apolitical. We display both nuclear and anti-nuclear literature in our store. Adopting an apolitical stance has meant that we have gotten much broader support than we would have otherwise.

At the beginning, we were not clear about our role. Now we see ourselves as the equivalent of the car lot salesman in the automobile industry. In the automobile industry, there is a broad level of world-wide publicity generated by all the automobile manufacturers and service people. The companies like GM and Ford have nation-wide and state-or province-wide publicity. In that chain you eventually get to the local GM dealer. He often appears on the local TV promoting GM products. People on the street know him. He's the one you actually buy the car from. In the energy conservation field we see ourselves as performing a similar function. Although there has been a lot of publicity about energy from senior government and the private sector, local advocacy is necessary. People are more willing to believe the person down the street. They don't believe those people down there in Toronto. We also believe that our role is 90 per cent advertising. There are many people in Peterborough who are doing more than we could ever hope to accomplish. Our job is to see that these efforts are made known to others. This does not mean that all we do is advertise. We hold events where energy-conserving initiatives are displayed or demonstrated. But advertising is key to our approach. Because we are a non-governmental agency, we can tap advertising resources in a way that government cannot.

The lack of ministry funding was an advantage. We could not have got our store, media help, and volunteers if we had been identified as being paid by the ministry.

What have been our results? It's hard to say. We believe that we are doing a good thing. We believe that the changes we are effecting in Peterborough will last and that is enough for us. Our last survey did reveal that out of 500 people surveyed over half knew what E.S.P. was.

I would recommend Energy Savers Peterborough as an example to follow. I think that it is a good way for government to work especially if you have contact people in the municipal government and in the provincial government as good as the people that helped us. It's not easy for any level of government to be subtle, to act a a catalyst or as a safety net for volunteers. It's always much easier for them to come in and do it all. And yet in the area of energy conservation, as in many other areas of community life, government must strive to tap the volunteer resources. Energy conservation is too important to be left to government and it's too complex to be left just to volunteers. I recommend this initiative of the Ministry of Energy as a healthy mix of government and volunteers.

TORONTO'S ENERGY CONSERVATION COMMUNITY OUTREACH PROJECT

Nancy Singer, Project Coordinator, City of Toronto

Our project is completed and we're now evaluating its results. What I'd like to discuss today are the rationale underlying the project, our evaluation of it, and the lessons we learned.

When we started we had several concrete project aims. One was to develop a municipally coordinated energy advisory service. Our emphasis was on service; we did not want to just provide information. We also wanted to improve the quality of retrofit work that was going on in terms of renovation activities. We wanted to establish a data base in order to be able to document the thermal efficiency of residential units in the city. We wanted to reach those who so far for various reasons have not been motivated to undertake energy-conserving actions in their home. We wanted to ensure that those who were able to willing to finally, we wanted to test various approaches to encouraging energy-conserving action in the home.

With these aims in mind, we sat down and sorted out an action plan. Our project team consisted of four permanent staff, a building inspector, a clerical/administrative assistant, a technical assistant, myself, and a project manager. We decided to operate in one area of the city, an area known as the Riverdale neighbourhood. It has a population of 70,000. Its 18,000 households occupy predominantly single and semi-detached units. It is a mixed ethnic community and we had to design our services to meet the needs of the Greek, Chinese and other residents. The main reason for choosing Riverdale as our test area were that the province's Howland House, an energy conservation demonstration project, was in Riverdale and a number of other energy-related activities were going on that we could tap into.

We came up with a list of project services and a one-stop shop approach. Our list of activities included:

Housewarming parties. Eight to 14 people would be invited to a neighbourhood home for a three-hour demonstration workshop about energy conservation retrofit techniques.

Renovation advice. An ECCO staff building inspector made visits to homeowners to provide practical, free advice about energy retrofit measures. This service has now become a city-wide service.

Hardware store demonstrations. A series of Saturday morning energy conservation demonstrations were held in Riverdale hardware stores.

Toronto Hydro check-ups. ECCO staff, through the local media and the distribution of appointment cards to homeowners, attempted to make sure local residents were aware of the free home energy advice offered by Toronto Hydro.

Heating oil check-up. All Riverdale residences with oil furnaces were given the opportunity to have a free furnace check-up by a major oil company service contractor.

Courses. ECCO coordinated two kinds of courses: ones aimed at professional contractors, hardware store owners and building inspectors; and ones aimed at the general public.

ECCO line. The project operated an energy conservation hotline to provide individual assistance to area residents.

Elementary school mini-courses. Through the Toronto Board of Education's Advocate Conservation Effectively Program, ECCO staff met with public school children to talk about energy conservation and distribute brochures.

Ecumenical Energy Working Group. ECCO staff worked with the Ecumenical Energy Working Group, a national organization, to promote energy-conserving measures in Riverdale churches.

Public Forums. ECCO staff, in conjunction with the Ministry of Municipal Affairs and Housing, helped or organize a conference on neighbourhood planning issues which highlighted energy conservation opportunities.

Gerrard Square Show. Over a five-day period, ECCO ran an energy conservation show in the Gerrard Shopping Mall and featured displays and demonstrations by both government and industry.

We finished our service delivery in May and we spent part of the summer conducting a questionnaire survey of our ECCO project participants. We hired a consultant to design an evaluation approach for us that would come up with some measure of the amount of energy saved as a result of our efforts. Unfortunately, the application of the evaluation model that was developed would have cost the same amount as the project itself and so we had to adopt a more pragmatic and less sophisticated evaluation method focused more on the extent to which the project had motivated people to become involved in energy conservation. Throughout the project we maintained an extensive information base. We had data sheets for every activity which listed all of the participants and their housing and demographic characteristics. This information base was an asset to the evaluation that we conducted.

Our response rate was somewhat disappointing. We didn't allow ourselves enough time for telephone follow-ups to obtain missing data. We averaged about a fifteen percent rate of return which isn't bad for a mail out survey. We had hoped to average twenty-five percent. Given our rate of return, however, the survey is a somewhat biased sample. Not all housing types are adequately represented nor are all income groups; the income of the respondents was mainly in the upper range.

One of the things we wanted to find out was whether Riverdale residents would be likely to take action as a result of the ECCO project. We asked questions about each of the possible energy conservation measures that we had highlighted during the project. The survey revealed a strong propensity on the part of the respondents to do something, to undertake one of more energy conservation options. Another thing we wanted to find out was whether the community needed our assistance in the first place, in other words, how informed and technically competent were they when it comes to energy conservation measures.

The survey revealed that the majority of the respondents had the required skills but that they certainly needed additional information before they would be willing to initiate anything. They weren't quite sure what to do. Finally, we wanted to know how the respondents had heard of the project and we tried a number of different approaches to penetrate the community. We wanted to know what worked and what didn't. The survey revealed that the flyers and our newspaper columns were the most effective and that many of the respondents had heard about the project from their neighbours and friends.

Overall the evaluation process helped us to sort out what we had learned about the kind of approach we took and to identify possible implications that others interested in initiating a similar project should keep in mind:

1. Energy advisory services have two main results for participating households and for society at large. The first is the quantitative results, those that can be measured such as the amount of fuel conserved. The second is the qualitative benefits. An energy advisory service helps to ensure that the work is properly done.

2. Energy renovation advice must be delivered by professionally trained and qualified people. This is essential to ensure that proper, up-to-date advice is being given to householders and to maintain the credibility of the project.

3. An energy advisory service is more likely to succeed if it starts our within an existing institutional framework. This could be the municipality, a local utility, or some other organization that would lend the project credibility, make it easier for residents to accept it, and provide the support systems necessary to run this type of project on a day-to-day basis.

4. Site specificity is important. The advice is more effective if it is given in the resident's home. You have to be able to see the resident's problem, diagnose it, and then give concrete recommendations on what should be done.

5. It's also important to make full use of existing community organizations. Instead of setting up your own communications and advertising network, use the resources that are available within the community such as libraries, utilities and hardware stores.

6. An ECCO-type project is transitional. It is not a permanent project. It's a special purpose project intended to serve as a catalyst for individual and community action. Once its objectives have been met it should be phased out. The services offered by the project should and can be integratd into more permanent institutional bases such as municipal departments, schools, churches an other organizations.

At this point in time we are negotiating a new propsal with the Ministry of Energy to document everything that we have learned. We're calling this the ECCO Transition Project. Transfer material will be prepared for all of our successful initiatives so that other municipalities and groups can use the services that worked for us.

QUESTION PERIOD

Question: Can you tell us more about the activities being undertaken in the transition phase?

Nancy: What we're doing now is taking the initiatives that we consider successful, such as the housewarming parties and the energy renovation advice, and attempting to develop transfer materials that will help others to apply these measures. We will be preparing detailed guides on how to organize and conduct housewarming parties and a renovation advisory service. This package of materials will be available through the Ministry of Energy hopefully by the end of April 1984.

Question: What response did you get from the ethnic communities?

Nancy: We did really well with the Chinese community but did not get a good response from the Greek community. The main reason for this, I think, is that the Greek community tends to be a closed community. They are not all that interested in government assistance. They tend to provide their own support services through informal networks. And so it was very hard for us to break into the community.

Question: Did the Greek community know about ECCO?

Nancy: Yes. All of our material was translated into Greek and Chinese and distributed widely in all the neighbourhoods. We also had access to City Hall interpreters and we hired people to do technical demonstrations in Greek and Chinese.

Question: Is the service continuing now?

Nancy: Certain parts of it are continuing such as the renovation advice. We are not promoting it too much at this point because we are working to develop a city-wide program and once that is in place we will step up our promotional efforts. Some of our staff are still operating out of Howland House and we are getting calls for energy conservation advice. There is another program that we did bring on stream that I would like to mention. One group we felt we weren't targetting was the

low income residents, including handicapped people, elderly citizens, and single parents. We designed a program called "Draft Stop" which is now in place and has serviced more than 60 senior citizen homes to date. We go in and do the weatherization work at low or no cost depending on the income of the resident. We train unemployed people to carry out the weatherization work and so there's a match between the need to respond to the energy problem and to the problem of unemployment.

SUMMARY

Jane Allen, Advisor, Energy Planning, Ontario Ministry of Energy

You have heard from the deputy minister this morning and also from several municipal councillors and project leaders of the need for municipal and community involvement in energy conservation programs. I think that that is an important message. You've also been made aware that there is a lot of talent and experience available in municipalities across the province and a lot of information resources available from Ministry. We hope you'll take advantage of these. Give us a call or drop us a line or come into our offices and we'll be pleased to help you out. And I'm sure each of the speakers you heard from today would be more than willing to do the same.

I'd like to thank the speakers and you for taking the time from your busy agendas to come here to talk about the progress and prospects for community energy action.

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